

*Creative
Teaching
in Health*

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DONALD A. READ

UNIVERSITY OF MASSACHUSETTS

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TEMPLE UNIVERSITY

Assisted by Randolph E. Edwards

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Preface

Within the field of health education, as in other *subject areas*, there is a growing realization that a quality teacher is something more than a knowledgeable professional with a sense of organization. On every faculty, whether in the elementary school or on the university campus, one finds those special individuals who seem to have a knack for making the most of the available material and human resources. When these teachers enter a situation, the whole suddenly becomes larger than the sum of its parts and good things begin to happen at a faster pace. The element of "creativity" seems to be most responsible for this special ability. Because of the popularity and importance of this nebulous concept, the authors felt that there was a definite need for a book on creative teaching as it applies to health education.

When the authors selected creativity as a point of reference for an examination of the teaching process, they found that simplified views no longer applied. Teaching becomes a highly complex task involving an interaction of content, technique, learner, and teacher, each of which possesses qualities that are constantly changing. These factors render every situation unique to some degree; the teaching process thus becomes an art, rather than a science, and creativity becomes essential to good performance. The purpose of this book, then, is to stimulate the thinking of both present and future health teachers on the role of the creative element in effective teaching. It is hoped that this book will contribute to the development of the new and vital approach in school health education that is so greatly needed. To this

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end the authors have sought to provide guidelines and suggestions leading to fresh, more creative approaches.

If it can be said that this book has one central focus, it is the role and responsibilities of the classroom teacher as major forces in the creative teaching-learning environment. The emphasis is on creativity as it relates to the selection of illustrative content, the development of teaching techniques, and the evaluation of instructional outcomes. Important features include the use of the taxonomies of the cognitive and affective domains in the construction of objectives and the presentation of suggested concepts for use within the more critical areas of the health education curriculum.

In the organization of this volume the authors have sought to provide a framework for the logical examination of new ideas and developments in health education. Part I examines the status of and trends in health education today and includes a discussion of some of the basic prerequisites for effective teaching. The teacher's major duties and responsibilities in guiding the learning processes are examined in Part II. Part III presents examples of creative teaching at the elementary and secondary levels in certain priority topics. Finally, Part IV explores the possibilities of creative evaluation and the teacher's continuing growth.

Creative Teaching in Health includes a good deal of background information on crucial health problems and provides curriculum recommendations in the form of priority concepts. However, these are included to stimulate the reader's critical processes, rather than to provide a curriculum model. Final decisions on matters of curricular emphasis should be made by responsible persons at the local level. This well-accepted principle, although presented repeatedly throughout this text, merits additional emphasis here. Once the basic curricular decisions have been made, the teacher faces the challenging task of selecting specific facts, examples, materials, and techniques in the proper combination to reach a specific group of young people. At this point the element of creativity is essential to quality teaching; this is the element we hope to develop.

Much gratitude is due to The Macmillan Company for editing and publishing this joint endeavor. A final word of appreciation must be extended to the authors' wives, Sue Read and Francie Greene, for providing much of the tangible and most of the intangible support needed to sustain this project.

D. A. R.
W. H. G.

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PART I

Gaining Insights

*A man's mind, stretched by a new idea, can
never go back to its original dimension.*

Oliver Wendell Holmes

Status of and Trends in Health Education

Man's investigation of disease and its relationship to its victims has been a persistent one. In earlier civilizations, methods of examination depended upon flashes of insight and ingenious observation rather than upon a knowledge of etiology. But now that the germ theory of disease is firmly established, students of health can lessen their concentration upon causes and begin to learn to function effectively and creatively within an atmosphere that stresses disease prevention. In order to foster such an atmosphere, a special kind of education is required.

It is not enough today to consider the student as a human vacuum into which a teacher can pour all the accumulated wisdom of good health. For one, the practice of merely teaching unrelated facts of doubtful relevance is receiving severe criticism today. Essential background must not be omitted, of course, but its purpose should be considered carefully so that the information is meaningful to the student.

A second consideration must be given to the students themselves. Mere translation of knowledge by an adult does not necessarily make him an adequate teacher in the eyes of his pupils. The students have been raised in a society that considers them free individuals, and professors whose presentations are dry will soon realize that their students are obviously bored, restless, or absent frequently.

Two of the primary responsibilities of the health educator are to reach the level of self-awareness in each individual and to penetrate beneath the surface of the unimportant, allowing the student to become an *active participant* in his own health education. To ensure that this participation becomes an ongoing process capable of change and adaptation, the health education teacher must not only consider the needs and interests of the students while they are in school, but he must also prepare them to identify and satisfy needs that will arise in the future.

The health teacher should also recognize that good health may mean different things to different people. The student, the parent, the office worker, and the engineer all have diverse ways of life that require varying levels of physical activity, energy output, and food consumption. Each person is also subject to different kinds of stress, and each individual differs in his ability to cope with these anxieties. Health teachers can no longer afford to ignore these basic differences. Health education must be considered in terms of the individual if students are to be made aware of its benefits.

WHAT IS HEALTH?

There is considerable variation among health educators as they define the content, purposes, and teaching methods of health as a subject. Some emphasize it as a goal to be sought; others see it as an intellectual discipline involving the study of disease, the mind, the human body, and so on. Still others are concerned with the physical, mental, emotional, and social needs and interests of the students. These health educators feel that pupils need to grow in these areas in order to achieve a sense of identity, express themselves, and develop a sense of community responsibility. For our purposes, we will think of health as a state of being and of health education as a subject to be taught effectively.

Probably the most formal definition of health, and the one that is most generally accepted is that embodied in the World Health Organization's interpretation. "Health is a state of complete physical, mental and social well-being, and not merely the absence of disease and infirmity."¹

A newer, fresh approach to defining health is that of Dubos, who sees health as "the expression of the extent to which the individual and the social body maintain in readiness the resources required to meet the exigencies of the future."²

The second use of the word considers health as a subject that may be pursued and taught, in contrast to a general state of well-being of mind and body. Students attend health education classes in order to learn various concepts of a healthy state of being. In this sense, the term *health education*

¹ "Constitution of the World Health Organization," *Chronicle of the World Health Organisation*, 1:29-43, 1947, p. 3

² René Dubos, *The Torch of Life* (New York: Trident Press, 1962), p. 111.

is more common than *health*; it is defined as "the process of providing or utilizing experiences for favorably influencing understandings, attitudes, and practices relating to individual, family, and community health."³

Various health and educational groups have adopted resolutions or have issued statements concerning health education in the schools. Two of the more noteworthy groups, the American Medical Association and the National Education Association, have made very positive statements concerning the need for health education. In June of 1960, the House of Delegates of the American Medical Association adopted a resolution supporting school and college health instruction. It was as follows.

Resolved, that the American Medical Association reaffirm its long standing and fundamental belief that health education should be an integral and basic part of school and college curriculums and that state and local medical societies be encouraged to work with the appropriate health and education officials and agencies in their communities to achieve this end.

The National Education Association in its project for instruction, *Schools for the 60's*, stated in 1963,

The content of health instruction belongs in the school curriculum because such knowledge is necessary, is most efficiently learned in schools, and no other public agency provides such instruction.

These two organizations have also prepared a statement which defines what health education is and is not. This statement focuses essentially on health education as an academic field and subject.

HEALTH EDUCATION IS:
education for health; education for healthful living of the individual, family, and community.

an academic field and subject. All of its content and objectives are intellectual and academic in nature. Its content must have meaning and purpose to the students now as well as in the future.

HEALTH EDUCATION IS NOT
hygiene of yesteryear. It is not "blood and bone" hygiene, nor is it physiological hygiene.

anatomy or physiology or both of these combined. These fields serve as its foundation, but do not contribute the major concepts of its body of knowledge. They are necessary as background to under-

³Joint Committee on Health Education Terminology, "Health Education Terminology," *Journal of Health, Physical Education and Recreation*, Vol. 33, No. 28, November, 1962

a relatively new discipline. The natural (biological), the behavioral, and the health sciences provide its foundation.

a combination of facts, principles, and concepts pertaining to healthful living. These constitute its body of knowledge.

a body of knowledge identified, organized, synthesized, and utilized in appropriate courses and experiences and sequentially arranged to form the discipline.

derived from sociology, psychology, educational psychology, and the behavioral sciences—its purpose is to change health behavior favorably.

a needed approach to bridge the gap between scientific health discoveries and man's application of these discoveries in daily life.

an integral part of the curriculum at every level. It is an essential element in the general education of all students.

the education component of a school, college, or university health program.

a contribution to the well-educated individual by providing meaningful health experiences which can change health behavior.

best achieved by developing the rational powers of man (critical thinking). This enables him to

stand health concepts applied to living.

a pure science, but an applied science. It is an applied science concerned with man's understanding of himself in relation to health matters in a changing society.

physical education. Health education and physical education are separate and distinct fields. They have similar goals and are closely related, but their activities are completely different.

physical fitness. It contributes to the total fitness of man. It is not synonymous with muscle fitness.

driver education. Health education is related to driver education through its safety area.

a requirement course organized to deal with legal provisions of alcohol, narcotics, and fire prevention. These are essential problems that should be incorporated with other basic problems to provide a structure course or program.

rainy-day or incidental instruction. Health education must be carefully planned and incorporated in the curriculum. It must be taught in a wholesome learning environment in which pupil activities can be carried out, particularly through problem-solving situations, under the guidance of professionally prepared health educators.

only instruction on grooming prac-

make wise decisions and solve personal, family, and community health problems. *tices, such as tooth brushing and combing the hair.*⁴

based upon and improved by basic and applied research.

best conducted by professionally prepared health educators from accredited colleges and universities.

Other authoritative groups—such as the American Association of Health, Physical Education, and Recreation; the American Dental Association; American School Health Association; American Public Health Association, and the American College Health Association—have adopted strong resolutions calling for a strengthening of health instruction in schools and colleges across the nation.

A NEED FOR IMPROVEMENT

It goes without saying that the health profession has come a long way from the days when Horace Mann, in 1842, urged educators to include health teaching in the public schools. But there is no doubt that still more improvement is needed in school health instruction on a broad scale.

A nationwide examination by the School Health Education Study Advisory Committee of large, medium, and small school districts in the United States revealed some glaring weaknesses in health education.⁵ The study focused on where health education is taught, how it is organized, and who teaches it. Some of the problems that were found to exist were the following:

1. An unawareness on the part of the general public of the important role of the school in the development of proper health attitudes and skills.
2. Lack of effective communication between schools and medical organizations.
3. Poor and inadequate preparation of teachers in health education.
4. A lack of sincere interest by administrators and curriculum supervisors of the need for health instruction and/or a tendency to regard health education and physical education as one and the same.

⁴Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association *Why Health Education?* (Washington D C The Associations 1965), pp 1-2

⁵School Health Education Study Advisory Committee, *Health Education A Conceptual Approach to Curriculum Design* (St Paul, Minn 3M Education Press, 1967)

5. Little or no working relationship between public and related health agencies and school health personnel.
6. A tendency for people responsible for curriculum planning to give health education low priority.

Along with these findings, the School Health Education Study Advisory Committee found that the content area of the curriculum was repetitious and that specific areas such as venereal disease, consumer awareness, and sex education were completely neglected in the health classes across the nation.

Status of State Certification in Health Education

A good indication of the status of health education throughout the United States can be gained from state requirements concerning teacher certification in health education. Another indicator is whether health is taught as a separate subject or in combination with one other area or more.

Dr. Wilfred Sutton, Professor of Health Science at San Fernando Valley State College, has recently obtained data concerning the status of state certification in health education for forty-five states. These results provide a fairly accurate picture of what is happening to health in terms of certification throughout the country. The results of the questionnaire prepared by Dr. Sutton can be found in Appendix C. Some of the more interesting findings are the following:

1. Health education is recognized as a teaching major for elementary school certification in fifteen of forty-three states, for secondary school in thirty-two of forty-three states, and for both levels in fifteen of forty-three states.
2. Health education is recognized as a teaching minor for elementary school teacher certification in twenty of forty-three states, for secondary school in thirty-two of forty-three states, and at both levels in twenty of forty-three states.
3. Health education is recognized as a separate subject in teaching certification in twenty-five of forty-five states, is combined with another subject or subjects in thirty-four of forty-five states, and is recognized as both a separate subject and in combination with another subject in seventeen of forty-five states. In states where health education can be combined with another subject or other subjects in teacher certification, physical education is the other subject specified in twenty-eight of forty-five states. Health education can be combined with safety; biology or biological science; physical education and safety; physical education and recreation; and physical education, recreation, and safety in some states.
4. As for preparation in health education being a requirement for

certification, twenty-one of forty-four states have no requirement at the elementary level (in the twenty-three states which require some preparation there is a wide variation in the requirement), and twenty-seven of forty-three states have no requirement at the secondary level in health content, the school health program, or health instruction.⁶

The results of this survey only help to magnify some of the crucial problems and stumbling blocks that have confronted school health education in its quest to provide adequate health education to all students on a national scale. The very fact that the majority of states in this survey have no specific requirement for the use of specialized health personnel would seem to indicate that school administrators and other responsible people feel either that health is a subject of little or no importance or that anyone can teach it. One of the primary figures in health instruction is the elementary teacher, yet those preparing for this profession receive little, if any, actual health education training. In most cases elementary education majors receive most of their training in the area of methods and materials, with a little health added.

This unfortunate lack of training for prospective elementary teachers prompted the American Association of Health, Physical Education and Recreation to form a committee to focus on the need for improvements in an elementary program of health education. Three noteworthy statements by the committee which have relevance to the discussion here are given.

1. There is a need for more and better (high quality) preparation in health education for prospective elementary school teachers. Too many teacher education programs provide, at best, minimal experiences in health education, so that teachers frequently do not understand or appreciate the relationship between well-being and the teaching-learning process.

2. Public and private colleges and universities with teacher preparation programs should establish reasonable requirements in the area of health concept or health-related knowledge courses for all elementary school teacher candidates.

3. . . . Administrative support of health instruction programs needs to be encouraged. Teacher preparation courses in health education especially should gear efforts to students as potential administrators/teachers. Tomorrow's teachers are the administrators of the more distant future, whose support should be cultivated while they are

⁶Wilfred C. Sutton, "Status of State Certification in Health Education," presented at American Association of Health, Physical Education and Recreation Conference on Teacher Preparation in Health Education, Washington D C., February 8, 1968

undergraduates. Greater support from today's administrators, too, ought to be sought. School boards of education also have to be told and sold the need for health education by America's children to help ensure the well-being of our country.⁷

The great knowledge explosion of the last ten years creates a greater need for teachers who have a commitment to the field of health education. The profession can no longer merely get by with part-time teachers, resource people, and hand-out material. The struggle to keep abreast of health information even within the profession will require very soon a complete redefinition of the subject matter. Even trained health teachers are finding it more and more difficult to teach health education as an isolated subject. It is obvious that a program of continuous education from kindergarten to twelfth grade will be essential if those interested and involved hope to do the job.

Part of what is necessary can be found in the recommendations made by Jessie Helen Haag after she had reviewed the teacher certification requirements for secondary school teachers in the fifty states and the District of Columbia. Her reasons for the choices of the content areas, semester hours, and description of content are given in her article.

I. Provisional certificate

Academic major—health education.

An approved program of health education offered in an accredited college or university.

Three semester hours of methods in health education as a part of the professional or teacher education requirements.

Six semester hours of student teaching in health education as a part of the professional or teacher education requirements and under the supervision of professors of health education with an academic major in health education and with public school teaching experiences in health education as their major assignment.

Twenty-four semester hours in an academic *minor*, preferably biology with major emphasis upon human anatomy and physiology.

Twenty-four semester hours in an academic *minor*, preferably education in Departments of Health and Safety Education, Health Education, Health and Physical Education, or Physical Education. Program consultant is a professor of health education with an academic major in health education and public

⁷Evelyn G. Clark et al., "Needed Improvements in Elementary School Health Education Programs," *Journal of Health, Physical Education, and Recreation*, February, 1967, p. 28

school teaching experiences in health education as his major assignment.

(Omission of courses in driver education and physical education such as adapted or corrective physical education, kinesiology, physiology of exercise, applied anatomy, athletic training, tests and measurements in health and physical education, organization and administration of health and physical education, school programs in health and physical education, and history and philosophy of health and physical education.)

Content in academic major:

1. *Current Health Problems* including mental health; skin infections; dental health; eye injuries, defects, and infections; posture; alcoholism; narcotic addiction; misuse of drugs, smoking; health conditions with no known cause and/or treatment such as diabetes; wise consumer of health products and services; quackery.
2. *School Health Program*
3. *American Red Cross First Aid and Medical Self-help.*
4. *Safety Education* including occupational, home, and recreational safety; and man-made and natural disasters.
5. *Community Health* including water purification and pollution, water-borne diseases, sewage treatment and diseases resulting from inadequate sewage disposal, vector control, rabies and rodent-borne diseases, food-meat-milk inspection, air pollution, radiation control, sanitation in food establishments, refuse disposal, and the agencies promoting community health; United States Public Health Service, state and local health departments, and numerous nonofficial health agencies.
6. *Nutrition in Health Education* including the science of nutrition, wise selection and use of foods, obesity, weight control, food faddism, food fallacies, and controversial nutrition topics.
7. *Disease Prevention* including the causative agent of each disease, occurrence, reservoir and source of infection, methods of transmission of the causative agent, incubation period, period of communicability, susceptibility, and many methods of control of the sixty most common diseases occurring to man.
8. *Family Life Education* including problems associated with the secondary school student's sex adjustment during his growth and development. Problems range from simple matters of personal health to the complicated physical, social, psychological and moral factors promoting a successful marriage and family relations.

- II. Professional certificate (teacher of health education in secondary schools with provisional certificate and at least three years of teaching experiences, graduate student in health education with teaching experiences in health education, and a 5th-year prepared teacher with appropriate teaching experiences.)

Academic major—health education.

An approved program of graduate study in health education offered in an accredited college or university.

Of the thirty-six semester hours, twenty-four semester hours of graduate study in health education in Departments of Health and Safety Education, Health Education, Health and Physical Education, or Physical Education. Program consultant is a professor of health education with an academic major in health education and public school teaching experiences in health education as his major assignment.

Content in academic major:

Twenty-four semester hours of graduate study in health education.
Nine semesters hours from

Consumer Health including consumer protection agencies, health misconceptions, health insurance plans, and health careers.

Mental Health.

Misuse of Alcohol, Tobacco, Narcotics, and other Stimulants, and Depressants.

Supervision of Health Education.

Three semester hours from *Safety Education, Family Life Education, or Community Health.*

Three semester hours from *International Health, Adult Health Problems, or Disease Prevention.*

Three semester hours in *Research in Health Education.*

Six semester hours in a *thesis* or *project* in health education.

Project must be acceptable to the Graduate School.³

RECENT TRENDS

In the area of teacher preparation there appear to be some encouraging developments. States such as New York, Illinois, Tennessee, Michigan, and others are replacing old laws and standards regarding teacher preparation. More definitive programs will precede efficient systems for getting plentiful and qualified teachers in the future. This, of course, sounds encouraging.

³Jessie Helen Haag "Certification Requirements for the Teacher of Health Education in the Secondary Schools" *Journal of School Health*, September, 1968, pp. 439-41.

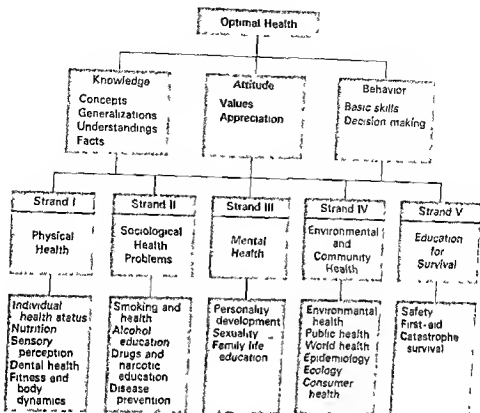


Figure 1-1. Outline of New York State school health education program.

but much needs to be done if we hope to fill the vacancies. New York State alone estimated that it needed 5,000 certified health teachers as of September, 1968. This need was based on the fact that New York State passed a law known as the Critical Health Problems Legislation, which was a "bold effort to expand and improve school health instruction on a broad basis. . . ." This law sets a requirement for health instruction to be given at all grade levels in all schools in the state. The program is broad in scope and is encouraging to health educators everywhere. For one, New York has issued a challenge to other states to follow suit. The above chart provides an excellent view of the outline and scope of the curriculum now in effect in New York.⁹

THE TEACHER, THE STUDENT, AND HEALTH

Health, unlike some other subjects, is a uniquely individual and personal experience. In math, science, history, and English one usually discusses events, effects, or objects which are only indirectly related to the student. In health, each individual in the room participates *as the subject matter*,

⁹Pearl E. Britton and John Sinacore, "Critical Health Problems Legislation," *Journal of Health, Physical Education, and Recreation*, March, 1968, p. 12

whether nutrition, hygiene, mental health, or disease is discussed. It seems natural to allow each student the opportunity to explore topics he feels are important for his own living experiences. In short, he makes the knowledge gleaned fit his personality. Good teachers recognize this unique personal characteristic of health and utilize it to great advantage.

Frequently teachers neglect to recognize this marvelous opportunity to present health in terms of personal needs and they interject their own value systems into their teaching. Examples of the "good" and the "bad" in teaching health can be given here. The teacher who discusses the negative aspects of smoking with his class of senior high school students can be certain that there are a good number of smokers present. This teacher offers no alternatives to his students but one, stop smoking. Students cannot identify with the subject when it is presented in this way. The smoker has heard this story a thousand times and is unconcerned. His father smokes and feels just fine. Besides, he cannot worry about what may happen when a person is forty-five years old or more. (That's almost a quarter of a century away!) The teacher who harangues his students with facts and figures, who places his own values ahead of objectivity, loses sight of the very personal nature of the subject matter. The effective teacher is the one who keeps his values to himself. He allows all sides to be heard, the nonsmokers, the smokers, the experimenters, the undecided. He attempts to let the pupils seek alternatives. He also helps the students develop, identify, and review their own values. He places the needs of the students ahead of facts and statistics. Such a teacher recognizes that young people do not smoke out of a desire for self-destruction, but out of a very basic need for acceptance, identity, or adult responsibility. He is the teacher who ultimately receives satisfaction in teaching health. He realizes that health education is more than presenting the most obvious point of view and that in order to achieve a margin of success, he must be willing to sacrifice the obvious for an often frustrating search for realistic alternatives.

To be a teacher of health today requires more than an accurate knowledge of subject matter. It requires sensitivity to the very personal nature of the subject; an awareness of individual needs, beliefs, and prejudices; and an understanding of the multifarious aspects of the subject.

The question now becomes one of discovering what will influence each student to gain knowledge that will build healthful attitudes and behaviors. We cannot accept the dictum that "some will get it and some will not." By its very structure, health can hold a vital fascination for every student. All it takes is the wise and interested teacher to release this interest.

When one examines life patterns he will find that each student has specific individual needs as well as certain universal physiological and psychological ones. Maslow, for example, offers a thorough analysis of basic psychological and physiological needs, which seems especially appropriate to the study of the needs of young people.¹⁰ These he classifies as (1) *physical needs* (food, water, and so on); (2) *safety needs* (freedom from threat, sense of physical security); (3) *belonging and love needs* (need for affection), and (4) *esteem needs* (need for respect as an individual). Maslow believes that there is a hierarchy of needs, and that once a person is able to cope with the lower needs as they arise, he will eventually be able to achieve *self-actualization*, which according to Maslow is the highest need classification and which he defines as the need to become what one is capable of becoming.

We have been able to help young people in health achieve relative degrees of success in meeting lower needs. What now must be done is to help these students achieve a degree of self-actualization. If a student is able to achieve a state of well-being that enables him to function "normally," he will be relatively free to satisfy his higher needs. These higher needs are necessarily more complex than the lower; they become highly individual as one seeks their meanings. (See Chapter 2.)

The very close relationship between the existing educational needs of students and adult interpretations of student needs is illustrated by the "Ten Imperative Needs of Youth," formulated by the Educational Policies Commission of the National Education Association.

1. All youth need to develop and maintain good health and physical fitness.
2. All youth need to understand the significance of the family for the individual and society and the conditions conducive to the successful family life.
3. All youth need to know how to purchase and use goods and services intelligently, understanding both the values received by the consumer and the economic consequences of their acts.
4. All youth need to understand the methods of science, the influence of science on human life, and the main scientific facts concerning the nature of the world and of man.
5. All youth need to be able to use their leisure time well and to

¹⁰Abraham H. Maslow, *Motivation and Personality* (New York: Harper, 1954), pp. 80-106

budget it wisely, balancing activities that yield satisfactions to the individual with those that are socially useful.

6. All youth need to develop respect for other persons, to grow in their insight into ethical values and principles, and to be able to live and work cooperatively with others.
7. All youth need to grow in their ability to think rationally, to express their thoughts clearly, and to read and listen with understanding.
8. All youth need to develop salable skills and those understandings and attitudes that make the worker an intelligent and productive participant in economic life.
9. All youth need to understand the rights and duties of the citizen of a democratic society, and to be diligent and competent in the performance of their obligations as members of the community and citizens of the state and nation.
10. All youth need opportunities to develop their capacities to appreciate beauty in literature, art, music, and nature.¹¹

The first seven of these needs of youth seem especially worthy of consideration in terms of stated objectives in health education.

Health Content

The variety and complexity of subject matter receiving attention in health education today adds to the difficulties of defining health as a field of study. One must now decide what to teach out of the many areas comprising the entire field of health. The health teacher will need to ask for what purposes he elects to choose specific areas of the subject matter and whether these are in accord with the needs and interests of the students. Moreover, if health is to become a dynamic study in a rapidly changing world, the teacher must incorporate the findings of the new behavioral sciences, as well as those of the medical, social, and physical sciences.

In order to be effective, the health teacher needs to keep abreast of current information. Consequently, it is becoming increasingly difficult to expect part-time health teachers to handle a full-time subject.

SUMMARY

If we are ever to help young people travel the road to a more meaningful and rewarding life, we must start by establishing a firm foundation of health knowledge, attitudes, and practices. Without this, the individual will lack the ability to reach his full potential or enjoy his achievements.

Health as a subject has become too complex for the average teacher. A certain amount of concentrated training and specialization prior to teaching

¹¹Educational Policies Commission, *Education for All American Youth* (Washington, O.C.: National Education Association, 1944), pp. 225-26

has become necessary. Moreover, various states are now seeking more qualified teachers to conduct efficient programs. If this is any indication of things to come, then colleges and universities across the nation will need to re-evaluate their own teacher preparation programs. The enlightened people who leave these programs will become the future citizens who will place a higher value on the need for a productive, creative, and meaningful program of health education for all youth.

To accomplish the task before us, many questions must be considered. What should the health curriculum be? How should it be taught? What are the needs and interests of students and of society? Finally, what is the educator's responsibility in general and the health teacher's in particular?

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2

Becoming an Effective Teacher

Young people, as never before, have remarkable opportunities for living and learning in an environment marked by change "so profound and far-reaching that the mind can hardly grasp all the implications."¹ The speed of change has been accelerated by, among other things, an explosion of knowledge, mobility, and mass communication. These changes have also had tremendous implications in terms of man's health. The unveiling of the DNA molecule will have a profound and lasting impact because of its potential for manipulating nature in ways that we cannot now even imagine. The frontiers of medical science are expanding rapidly and the pioneers are pushing their explorations into areas unthought of before. Heart, kidney, and other organ transplants are only the beginning. New drugs are being produced for cure and prevention and may one day unlock the mysteries of the human mind.

However, the very changes which have caused the miracles of discovery have also produced some ominous side effects. Rapid transportation has increased the likelihood of the spread of certain communicable diseases. An example of this occurred during the Hong Kong flu epidemic of 1968. Mass communication bombards man with a constant flood of exaggerated

¹ John W. Gardner, *Self-Renewal* (New York: Harper, 1965), p. xi

claims for products. Mobility has led to personal instability and isolation because it tends to prevent people from attaining a lasting relationship and identification with others.² The thalidomide tragedy of a few years back presents a picture of the complications that can arise out of too rapid a change. Man is sometimes unable to overtake, let alone understand, what he has produced.

THE ROLE OF THE HEALTH EDUCATOR

How does the health educator fit into this kaleidoscopic pattern? Should he attempt to reshape information to fit the needs of his students? Should he simply serve as a catalyst between the information to be learned and the learner? Or should he establish conditions of inquiry and free the mind of the student to explore, to feel, and to discover? The fact is that good teaching may require some of all these methods, plus a little more.

With the rapid increase in knowledge has come a new and more challenging role for the teacher. Times change and we must be prepared to change with them. Today we must not only have an understanding of subject matter, but also an understanding of and "sensitivity" to the students.

This point is illustrated in the report of the Committee on the Contributions of Psychology to the Problems of the Preparation of Teachers:

Basic in any program for the preparation of teachers must be a thoroughly scientific, broad, and insightful understanding of development in childhood and adolescence. The past mistake of education was that it was subject-centered rather than child-centered—a trite statement, but still all too true of practice. . . . Mastery of subject matter, the teacher naturally must have; but understanding of the child is clearly more vital. The teacher must be familiar with present knowledge regarding growth in physique, intellect, interests, emotions, attitudes, character traits, social adjustment—and the influences affecting those developments. But this knowledge must not remain abstract and depersonalized. It must function to give sympathetic understanding of children as developing organisms in dynamic interaction with their environment and show how such development may be most wisely and effectively guided and stimulated.³

UNDERSTANDING THE PUPIL

All individuals are different, and because of these differences teachers must consider two important facts. First, teachers must understand and recognize the differences. Second, they must use the results of their

²See Ernst van den Haag and Ralph Ross, *Fabric of Society* (New York: Harcourt, 1957), pp. 138-66.

³Committee, "Report of the Committee on the Contributions of Psychology to the Problems of the Preparation of Teachers," *Journal of Consulting Psychology*, Vol. 6, 1942, pp. 165-67.

observations as a basis for curriculum planning and creative teaching.

In health the teacher will want to have some understanding of the growth, development, needs, and interests of the pupils with whom he is working.

Growth and Development

As the growing individual proceeds along the developmental path, it is vitally important that his teacher be equipped to view him realistically. According to Hurlock, "growth refers to quantitative changes—increases in size and structure."⁴ Thus, as a result of an increase in size and structure of bones, muscles, and the brain, one "grows mentally as well as physically." Development, on the other hand, refers "to those changes which are qualitative in nature." This refers to the orderly changes which ultimately lead one to maturity, which marks a desired goal for personal growth and development.

The School-Age Child. Part of the excitement (and sometimes the agony) of teaching is the fact that the students who sit in a classroom are as different as their inquisitive faces. This is due to the factors of growth and development, needs, and interests as well as the home environments from which they have come. The problem of the teacher now becomes to recognize these differences, so that he will be able to adjust the curriculum, content, and methods to meet pupils' needs and interests; the teacher also must select the proper goals and instructional strategies. Fortunately, teachers have many tools available to help them learn about pupils. Tools such as tests and pupil records make it possible for a teacher to become fairly well acquainted with his pupils even though he may have three or more sections of twenty to thirty pupils each.

Some Useful Definitions

Before we go any further, certain definitions seem necessary so that we may be able to distinguish among such terms as *teacher observation*, *health services*, and so on.

Definitions

*School health services.** The school procedures which are established to (a) appraise the health status of pupils and school personnel, (b) counsel pupils, parents and other persons involved concerning appraisal findings, (c) encourage the correction of remediable defects, (d) help plan for the health care and education of handicapped children, (e) help prevent and control disease, and (f) provide emergency care for the sick or injured.

*Health appraisal.** That phase of school health service which seeks

⁴Elizabeth B. Hurlock, *Child Development*, 4th ed. (New York: McGraw-Hill, 1964), p. 1.

to assess the physical, mental, emotional and social health status of individual pupils and school personnel through such means as health histories, teachers' and nurses' observations, screening tests, and medical, dental and psychological examinations.

School health counseling:* The procedures by which nurses, teachers, physicians, guidance personnel, and others interpret to pupils and parents the nature and significance of a health problem and aid them in formulating a plan of action which will lead to solution of the problem.

Health observation† involves the continuous alert consideration by parent, teacher, nurse, dental hygienist, and others of all aspects of the child's appearance and behavior, with the objective of determining his fitness, or to discover any signs indicating his need for professional health services.

Health inspection† includes those formal procedures employed by nonmedical personnel in attempting to discover conditions indicating the need for referral of the child for medical, dental or other specialized care.

Screening tests,† a part of health inspection, are those preliminary evaluations of vision, hearing and other functions and conditions administered by teachers or nurses to screen out those children needing further examination and diagnosis by qualified specialists.

Medical Examination† is that phase of health appraisal which is conducted by a physician.

Personal physician:† The physician who usually provides medical services to the individual whether in individual private practice, group practice or through a public clinic. He may be a general practitioner, internist, pediatrician, surgeon, psychiatrist or other (doctor of medicine) serving children of school age.

School physician:† A physician employed full time or part time by either a board of health or a board of education to direct the school health service program and advise the school on medical matters.

Nurse serving the school:† A registered nurse (R.N.) employed by the board of education or board of health to perform public health nursing services for school children and to counsel with parents and teachers about the health problems of children of school age (in most instances, a public health nurse with graduate training in public health nursing; in some states, with graduate preparation in education).

* Journal of the American Association for Health, Physical Education, and Recreation "Report of the Committee on Terminology in School Health Education," *Journal of the American Association for Health, Physical Education, and Recreation* 22:7; September 1951.

† National Education Association and American Medical Association, Joint Committee on Health Problems in Education. *Health Appraisal of School Children* Chicago: The Associations, 1968.

IDENTIFYING THE NEEDS AND INTERESTS OF ELEMENTARY AND SECONDARY STUDENTS

There are various ways of identifying the needs and interests of students. These include health knowledge tests, student interest scales, and the like. In the following pages we will look at some practical methods of determining needs and interests.

The Use of Measuring Devices

One effective means of indicating areas needing emphasis in the instructional program is to administer a test at the beginning of the first class. There are a number of tests available for this purpose, but those teachers who are interested in using one or more of these tests should be aware of some obvious shortcomings.³ One important factor is the impossibility of keeping these tests up to date. Some tests available for use by health educators date back as far as 1957; the most recent were made in 1963.

A second factor is the tests' inability to consider certain specific problems applicable only to a particular geographical area or socioeconomic level.

Others in the educational field also caution us against the uncritical use of standardized tests.

Over the years, it is neither the publisher nor the critic who most effectively determines the quality of tests; rather it is the test user. . . . There is no Good Housekeeping seal of approval in the field of test publication; there is no substitute for professionally competent and conscientious judgment on the part of the test user. Test publishers have important professional obligations; test users have parallel responsibilities.⁴

In many cases it would seem worthwhile for the teacher to consider some of the principles covered in Chapter 18, "Teacher-Student Evaluation and Personal Growth," and begin to develop the ability to construct his own health knowledge test. In this way the teacher can develop a timely and relevant instrument suited to the needs of his students and also perfect his skills in test construction.

Teacher Observation

As a source of information and as a means of getting to know each pupil, teacher observation is one of the best ways of accomplishing these goals. An alert teacher, properly trained, can often find clues to student needs and

³Mary K. Beyrer et al., *A Directory of Selected References and Resources for Health Instruction* (Minneapolis: Minn. Burgess Publishing Co. 1966).

⁴Alexander G. Vesman, 'The Obligations of the Test User,' *Proceedings, 1955 Invitational Conference on Testing Problems* (Princeton, N.J.: Educational Testing Service, 1956), p. 6.

interests by observing the appearance and general behavior of the student. Observation should also be made of such specific things as peer relationships, behavior on the playground, type of questions the student asks, and learning ability.⁷

It is also important that the teacher not limit his observation to the pupil. Many times the teacher can understand a pupil's problems better after talking with the parents. By utilizing the information gleaned through these observations, the teacher is often able to become more sensitive to the needs and interests of individual students.

This may all be well and good but the prospective teacher may ask, "What are we observing?" and "Where and how does one look?"

In health education, as in other subjects, the major areas of concern, and those we should be observing and learning from the most, are the physical, social, and emotional aspects of the student.

Among the qualities that one should be observing under the physical aspects of the student are the following:

A. *Normal vs. deviant physical development.* One needs to recognize changes in growth that are basically due to *normal* physical development as opposed to those that may be due to faulty eating habits, hormone production, birth defects, illness, accidents, or lack of proper exercise.

B. *Motor development.* Motor development is the ability of the individual to control his body. Motor development includes eye coordination, leg and foot coordination, arm and hand coordination, walking posture, such skills as running, jumping, lifting, climbing, writing, and manipulatory and repetitive activities. Teachers can observe a student's ability to control his body both inside the classroom and during recess.

C. *Sexual development.* An accurate knowledge of sexual adjustment can help meet the needs and interests of young people. Observation of the everyday behavior of the pupils indicates the readiness of the student to learn new material in sex education.

D. *Personal appearance.* Teachers should be constantly alert to the physical appearance of the student. They should be alert to respiratory or skin disease and other conditions which may warrant inclusion of specific subject matter. For example, the teacher may note an increase in symptoms of the common cold during the month of November. This could possibly indicate a need to shift the curriculum in order to present the discussion on communicable disease earlier in the year rather than in the month of January.⁸

⁷An excellent book on observation is George M. Wheatley, M.D., and Grace T. Hallock, *Health Observation of School Children*, 3rd ed. (New York: McGraw-Hill, 1965).

⁸See Stephen M. Schneeweiss and Ralph Jones, "Time Linked Health Problems: The Monthly Health Specials Calendar Approach for Use in Grades K-6," *The Journal of School Health*, Vol. XXVIII, No. 8, October, 1968, pp. 524-27.

Among the conditions that a teacher notes as he observes his pupils or that may be brought to his attention are the following^{*}

1. Eyes
 - a. Sties or crusted lids
 - b. Inflamed eyes
 - c. Crossed eyes
 - d. Repeated headaches
 - e. Squinting, frowning, or scowling
 - f. Protruding eyes
 - g. Watery eyes
 - h. Rubbing of eyes
 - i. Excessive blinking
 - j. Twitching of the lids
 - k. Holding head to one side
2. Ears
 - a. Discharge from ears
 - b. Earache
 - c. Failure to hear questions
 - d. Picking at the ears
 - e. Turning the head to hear
 - f. Talking in a monotone
 - g. Inattention
 - h. Anxious expression
 - i. Excessive noisiness of child
3. Nose and Throat
 - a. Persistent mouth breathing
 - b. Frequent sore throat
 - c. Recurrent colds
 - d. Chronic nasal discharge
 - e. Frequent nose-bleeding
 - f. Nasal speech
 - g. Frequent tonsillitis
4. Skin and Scalp
 - a. Unusual pallor of face
 - b. Eruptions or rashes
 - c. Habitual scratching of scalp or skin
 - d. Nits on the hair
 - e. State of cleanliness

^{*}Reprinted with permission from the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, Washington, D C and Chicago School Health Services (Washington, D C The Associations, 1953), pp 21-22

- f. Excessive redness of skin
- 5. Teeth and Mouth
 - a. State of cleanliness
 - b. Gross caries
 - c. Irregular teeth
 - d. Stained teeth
 - e. Gum boils
 - f. Offensive breath
 - g. Mouth habits such as thumb sucking
- 6. General Condition and Appearance
 - a. Underweight—very thin
 - b. Overweight—very obese
 - c. Does not appear well
 - d. Tires easily
 - e. Chronic fatigue
 - f. Nausea or vomiting
 - g. Faintness or dizziness
- 7. Growth
 - a. Failure to gain regularly over six-month period
 - b. Unexplained loss in weight
 - c. Unexplained rapid gain in weight
- 8. Glands
 - a. Enlarged glands at side of neck
 - b. Enlarged thyroid
- 9. Heart
 - a. Excessive breathlessness
 - b. Tires easily
 - c. Any history of "growing pains"
 - d. Bluish lips
 - e. Excessive pallor
- 10. Posture and Musculature
 - a. Alignment of shoulders and hips
 - b. Peculiarity of gait
 - c. Obvious deformities of any type
 - d. Alignment of spine on "standing tall"
 - e. Muscular development
 - f. Coordination
 - g. Muscle tone
 - h. Use of the feet in standing and walking
- 11. Behavior
 - a. Overstudious, docile and withdrawing

- b. Bullying, overaggressive and domineering
- c. Unhappy and depressed
- d. Overexcitable, uncontrollable emotions
- e. Stuttering or other forms of speech difficulty

Put X after item when there seems to be an abnormality or defect		Teacher's Observations		Circle X when defect has been corrected or pupil is under medical care	
General	Appearance				
	Tires easily				
	Posture				
	Muscular coordination				
Eyes	Eyelids				
	Crossed eyes				
	Squint				
	Frequent headaches				
Ears	Discharge				
	Earache				
	Does not hear well				
Nose Mouth Throat	Frequent colds				
	Mouth breathing				
	Frequent sore throat				
Behavior	Speech defect				
	Emotional disturbance				
	Nervousness-restlessness				
	Twitching movements				
	Shyness				
	Over-aggressiveness				
	Nail biting				
	Excessive use of lavatory				
Hygiene	Personal hygiene				
	Food habits				
Other	Obvious orthopedic defects				
	Obvious dental defects				
Days absent due to illness					

Figure 2-1 Example of a form used by the teacher in recording observations.

- f. Lack of confidence, self-denial and self-censure
- g. Poor accomplishment in comparison with ability
- h. Lying (imaginative or defensive)
- i. Lack of appreciation of property rights (stealing)
- j. Abnormal sex behavior
- k. Antagonistic, negativistic, continually quarreling.

GAINING IMPRESSIONS OF THE SOCIAL AND EMOTIONAL PROBLEMS OF STUDENTS

Possibly no other aspect of the educational process is more important than the promotion of healthy personal adjustment in every student. If education could achieve this, it would go a long way in filling an important need of society. Because of this, teachers, counselors, and others who work with children and adolescents need to find ways to examine and interpret individual behavior. Just as important to the health educator is the problem of understanding why social and emotional problems develop and how to promote an environment that leads to positive growth in the individual.

An excellent source from which teachers can gain insights into the social and emotional problems of students is the observation of each student's interaction with members of the class. Does he act shy, aggressive, fearful, or quarrelsome? Personal and private discussions regarding the child's plans for the future, his likes and dislikes, can also offer valuable information regarding his needs and frustrations. Talks with school counselors and previous teachers may shed light on individual students. When a teacher is able to piece together all the objective and subjective material he can obtain, he is often able to shed light upon a child's personality and his development.

Wheatley and Hallock in *Health Observation of School Children* have compiled a list of some common indications of maladjustment in school children which the teacher can use as a guide in observation. They are too numerous to list, but the source is highly recommended by the authors.

Another important factor in gaining impressions of the social and emotional problems of young people is understanding them in terms of their needs. All students have basic needs.¹⁰ For this reason it seems important that a teacher have some understanding of these needs, not only to enhance communication between himself and the student, but to plan class objectives and select subject matter. With an eye to helping students meet their needs, an instructor can promote positive health attitudes at the same time.

Maslow¹¹ offers a thorough analysis of basic needs, which seems especially appropriate to a study of the needs of school-age children. He proposes the

¹⁰See John E. Horrocks, *The Psychology of Adolescence* (Boston: Houghton Mifflin, 1962), pp. 502-19, for a discussion of psychological needs during adolescence.

¹¹A. H. Maslow, *Motivation and Personality* (New York: Harper, 1954), p. 80.

concept of "hierarchies of prepotency" in which needs develop in a hierarchical sequence from the lowest survival needs to the highest achievement of need-oriented goals. This transition is accomplished by what he terms *prepotency* of need fulfillment. A need that has been satisfied is no longer a need; therefore, the satisfaction of one need releases the individual to try to satisfy other needs. This hierarchy, from lowest to highest, includes *physical needs*, such as hunger and thirst; *safety needs*, such as protection from injury and fostering of a sense of security; *belongingness and love needs*, such as the need for affection, love, and a feeling of belonging; and *esteem needs*, which includes one's desire for self-respect.

According to Maslow, once the lower needs have been gratified, the individual is capable of becoming "actualized in what he is potentially." In other words, he will be free to achieve *self-actualization*.

Gaining Insights into Student Needs

The student's behavior is affected by his needs, as well as by his environment, parents, peer group, and pressure for achievement in school and in life. If the teacher understands the effect of such influences upon the student, his teaching will become that much more effective and meaningful to the student. Let us look more closely at Maslow's needs to gain understandings of why students are as they are.

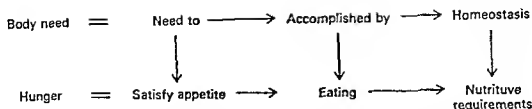
The *physical needs* include the need to maintain internal equilibrium. This need of the organism to maintain a constant state of functional balance is called *homeostasis*. Claude Bernard was the first man to draw scientific attention to the fact that one of the most characteristic features of all living beings is their ability to maintain the constancy of their internal milieu, despite changes in the surroundings. Bernard was, appropriately, the father of modern physiology.

Walter B. Cannon subsequently called this power to maintain constancy in living organisms *homeostasis* (a word derived from Greek which means "staying the same").¹² Just as the automatic shift in an automobile works to put the car into another, more efficient gear when it reaches a certain speed, so the human body also has many *automatic-control* mechanisms which enable it to cope with some challenge or body need.

Cannon cited a number of factors that are influenced by homeostasis. These include the content levels of *water in the blood* and the amount of salt, sugar, protein, fat, calcium, and oxygen in the body. Also significant are the constant hydrogen-ion level and the constant temperature of the blood.

An example of a bodily need achieving homeostasis may be represented as follows:

¹²W. B. Cannon, *The Wisdom of the Body* (New York: Norton, 1932)



Safety needs are almost as important as are physiological needs, especially at an early age. These safety needs include freedom from injury and threatening situations, as well as a feeling of security from life's major hazards. The teacher can help the student to achieve these needs through the promotion of safety education. One way to get information on what to teach is to observe the leading causes of deaths resulting from accidents at different age levels. (See Table 2-1.)

TABLE 2-1
Leading Causes of Deaths Resulting from Accidents per 100,000
Population in the United States. Data are for 1964, latest
official figures.

<i>Cause of Death</i>	<i>Number of Deaths</i>
All Ages	
Motor vehicle	47,700
Falls	18,941
Fires, burns	7,379
Drowning	6,709
Other	24,271
Ages five to fourteen	
Motor vehicle	3,430
Drowning	1,467
Fires, burns	726
Falls	191
Ages fifteen to twenty-four	
Motor vehicle	12,400
Drowning	1,628
Firearms	629
Railroad	504
Falls	308

Belongingness and *love needs* emerge after the safety needs have been gratified. The family and the school are ideally suited to the fulfillment of these needs. The teacher can help the student toward achieving these needs by covering the role of the individual in healthy interpersonal relationships. The teacher can also promote this need for belongingness through the development of an environment which recognizes the student as an individual.

Esteem needs are represented by one's desire for a "stable, firmly based, usually high evaluation" of himself. The student needs a feeling of self-respect. He needs the feeling of accomplishment to feel adequate. Many small children begin elementary school with high hopes and enthusiasm, only to become frustrated and unhappy because they cannot do what is expected of them. Soon they cannot even complete tasks set by themselves because they see themselves as failures. A teacher can help every student to achieve some measure of success by praising all sincere efforts, however meager. The student's ability to fulfill these esteem needs will allow him to become a useful and mentally healthy member of the class. It is hoped that the self-confidence gained in good classroom situations will enable him to participate as a responsible adult.

The need for *self-actualization*, according to Maslow, is the highest of all the need groups. Under Maslow's hierarchical sequence, once the individual is able to satisfy the lower needs, which may vary from individual to individual, he is able to pursue goals outside of providing for the physical self. This will ultimately enable him to attain self-actualization. It is a moot question whether one can ever achieve complete self-actualization. Like good health, a person works toward it, satisfying other commitments and overcoming other obstacles as he does what he feels he is capable of doing under the circumstances. If an individual has a talent or interest in his life and pursues it, he has "actualized" more of his potential than one who has never bothered to develop any interest or discover what talents lie within him.

In its instructional aspects, health education must stress the fact that the physical self and the psychological self do not constitute a duality, but are unitary in their operation. What affects one affects the other in health and sickness. If the student is not able to satisfy certain lower needs, then these more basic needs will thwart his positive efforts toward self-actualization.

Teaching creatively can help to achieve this goal. Inlow describes a classroom climate where creativity can develop as one in which good mental health is promoted as a prime goal.¹³ The author points out that mental health and creativity lie along the same affective dimensions; both seek psychic fulfillment and self-actualization. Thus, Inlow contends, a classroom climate which produces good mental health is one which also nurtures creative productiveness.

Questionnaires as a Source of Information

Another way to discover the needs and interests of pupils is by simply asking them. This can be done in a number of ways. One is the preparation of a questionnaire in which the teacher determines what he wants to know and

¹³Gail M. Inlow, *The Emergent in Curriculum* (New York: McGraw-Hill, 1966), Chap. 5

then designs questions that will get the information. For example, a teacher in a senior high school wanted to learn what areas of drug education most interested his students. To find out, he designed the following questionnaire;

I would like to find out some of the areas which you are interested in learning about in drug education (for example, alcohol, smoking, marijuana, LSD, and so on). For this reason I am asking you to rank the areas I have listed, using the system set up below. At the end is a space for any additional comments you may have.

1. very interested in learning about.
2. interested.
3. not so interested.
4. not interested at all.

- | | |
|--------------------------------------|---|
| _____ Effects of alcohol on the body | _____ Stimulant drugs |
| _____ Social problems of alcohol | _____ Hallucinogenic drugs |
| _____ Alcohol and personality | _____ Why people smoke |
| _____ Alcohol dependence | _____ Smoking and health |
| _____ Why people drink | _____ Psychological aspects of smoking |
| _____ Opiate drugs | _____ Social aspects of smoking |
| _____ Depressant drugs | _____ How to quit smoking |
| | _____ Legal aspects of drug use |
| | _____ Social aspects of drug use |
| | _____ Psychological aspects of drug use |

Additional areas not covered (list)

Comments:

This questionnaire is obviously limited, and only a few of the many subject areas in health education are listed.

Questionnaires such as these are rarely effective at lower grade levels. One reason for this is that students in early elementary grades have no reference point on which to base their answers. As they move higher in the grades, they acquire some foundation with which to recognize areas of growing interest.

A way to tap the interests of pupils, especially at the elementary level, is to have them respond to a questionnaire such as "Things That I Do Which Are Unhealthy." An extension of this device is to use an open-ended ques-

tionnaire, which allows the students to elaborate their answers. Shown here is an example of this.

The foods I like to eat in the morning are_____

I brush my teeth_____.

Before eating I_____.

When it is cold out_____

Smoking_____.

When I ride in a car_____

Gaining Information from Others in the School Environment

Teachers, school nurses, guidance counselors, school custodians, cafeteria personnel, the principal, and, when possible, the school doctor and dentist can all provide help to those teachers who wish to learn about their students. From these people can be gained the following information

1. Health histories.
2. Personality ratings and descriptions.
3. Anecdotal reports.
4. Pupil's personal goals.
5. Prevalent health problems in and around the school.
6. Test data.
7. Levels of achievement.
8. Prevalent dental problems.
9. Accident problems in and around the school.
10. Major causes of absences.

These people can also be invaluable in assisting the health teacher in planning and preparing the classroom curriculum, as well as providing an excellent source of guest speakers.

With those people who are directly associated with the school environment are also a number of sources of information outside the school. The local health department, hospital, police department, and newspapers are all sources for discovering local health conditions and problems. In fact, this is only a partial list and it can certainly be augmented by the interested and resourceful teacher. Every situation is unique in what it has to offer. The teacher's responsibility is to seek each opportunity out and take advantage of it.

Putting Knowledge to Work

Vital information the teacher should have concerning students usually involve two important questions:

1. How much should the teacher know about each pupil?
2. How can the teacher put this information to work for him?

*INFORMATION A HEALTH EDUCATION TEACHER SHOULD KNOW
ABOUT EACH PUPIL*

- A. Vital statistics (from student).
 - 1. Name.
 - 2. Age.
 - 3. Sex.
 - 4. Grade.
- B. Family sketch (from school records, personal interviews, school counselor).
 - 1. Father's occupation.
 - 2. Mother's occupation.
 - 3. Number of brothers and sisters, age of each.
 - 4. Grandparents in home.
 - 5. Environmental surroundings.
 - 6. Pets.
- C. Health evaluation (from school doctor, nurse, dentist, health records).
 - 1. Diseases contracted, if any.
 - 2. Mental or physical factors (defects?).
 - 3. Social-emotional adjustment.
- D. Academic evaluation (from prior teacher and personal records).
 - 1. Standard test results.
 - 2. Reading level.
 - 3. Previous health tests.
- E. Future aspirations (from guidance counselor or from student).
 - 1. College.
 - 2. Skilled or unskilled labor.
 - 3. Trade school.
- F. Recreational interests (from personal profile or observations).
 - 1. Hobbies.
 - 2. Athletic interests.
 - 3. Part-time jobs.
 - 4. Father's and/or mother's interests.
- G. Health interests (from student and interest tests).
 - 1. What pupil would like to learn.
 - 2. What pupil would not like to learn.
- H. Present health knowledge (from health knowledge tests, observations).

Combined with specific teacher observations, parent-teacher conferences, and other additional information that the teacher may have gathered in the school and community, this data will help the teacher to become more sensitive to the needs and interests of students. By blending the needs of the school, the community, and society at large with the individual

needs and interests of student, the teacher should be more readily able to develop a varied and interesting curriculum.

The teacher can put this information to work by

1. Grouping students in class according to interests and levels of knowledge. Grouping, if flexible, can encourage both cooperation and healthy competition.
2. Planning lessons to meet individual needs.
3. Establishing realistic objectives that the students can attain.
4. Helping evaluate the course at the end of the semester or school year.
5. Helping to plan specific class activities.
6. Helping to evaluate individual students.

THE TEACHER IN SEARCH OF HIMSELF

In this chapter we have been discussing ways in which one can become an effective teacher. This can be achieved to some degree through gaining insights into individual students, their individual likes, dislikes, needs, and interests. But what about the teacher? Should he not also know who he is? Sidney Jourard, in his book *The Transparent Self*, thinks so.¹⁴ He states, "Alienation from one's real self not only arrests one's growth as a person; it also tends to make a farce out of one's relationships with people." Because a healthy personality (which includes the ability to know one's self) has been found to be so important in teaching, the sole criteria of the ability to teach are no longer a mastery of subject matter and the acquisition of one or two degrees. Today in order to understand students the teacher must first be able to understand himself. This theme is discussed by Combs and Snygg in their book *Individual Behavior*, where they state, "Effective teaching depends upon teacher perceptions. In particular, it depends upon the kinds of perceptions they possess about these things: (1) What people are like, (2) The goals and purposes of education in our society, (3) Effective methods of encouraging learning and, (4) The adequacy of the teacher's own personality."¹⁵

We have discussed or will discuss the first three to some degree in this book. What we want to do here is to explore briefly the fourth area, which concerns itself with the personality of the teacher. More specifically, Combs and Snygg are concerned with "the teacher's own concept of himself and of his role as a teacher." What does concept of self mean? Very simply, it means the concept an individual has concerning who and what he is. We know that, for example, a person who likes himself has one of the qualities necessary

¹⁴Sidney M. Jourard, *The Transparent Self* (Princeton, N.J. Van Nostrand, 1964), p. 26

¹⁵Arthur W. Combs and Donald Snygg *Individual Behavior* (New York: Harper, 1959), pp. 399-400

for good mental health. Conversely, one who has a strong dislike of himself has one of the typical symptoms of maladjustment. The way one views oneself influences his behavior. Thus, if a teacher sees himself as a main source of information rather than a resource upon which students can draw, as a stifler of activity rather than a stimulator, then his concept of himself will determine how the class is conducted. Similarly, if the teacher hopes to know as much as he can about each individual in his class, he must be able and willing to let others know him.

How does one achieve a degree of openness with himself and others? Carl Rogers has a number of worthwhile factors to consider:¹⁶

1. *Rejection of façades*: The ability to reject being what one is not.
2. *Rejection of submissiveness*: The ability to reject being what one ought to be and ought to become.
3. *Rejection of cultural expectations*: One begins to evaluate the worth of his cultural socialization.
4. *Movement away from trying to please others*: A person begins to do what he feels is most natural to his own actual selves.
5. *Movement toward being a "person" in flux*: One begins to be cognizant of fluid potentialities, not fixed goals.
6. *Movement of completeness of self*: A person needs to realize that he must possess a personality consistent with itself.
7. *Movement toward being open to experience*: One does not blot out thoughts, perceptions, feelings, and memories which may, at times, be unpleasant.
8. *Movement toward acceptance of others*: One is able to accept others.
9. *Ability to trust just his "selves"*: There exists the ability to trust and accept one's selves.

To help students discover themselves the teacher must first be able to discover himself. He can begin by becoming aware that various aspects of himself form a composite. Knowledge of what motivates these various aspects and to what extent he can control the motivations provides a valuable key to unlock his inner self.

SUMMARY

Health education has undergone rapid and drastic change since the turn of the century. Tremendous shifts of interest have occurred, both in the subject and in those being taught. Yet, along with this rapid change, there exist throughout our schools teachers whose outmoded ideas and methods of organization and teaching are woefully inadequate. Moreover, these people are detrimental to the overall growth and development of the students

¹⁶Carl Rogers, *On Becoming a Person* (Boston: Houghton Mifflin, 1961), pp. 163-98.

subjected to their influence. These teachers fail to consider the needs, interests, and readiness of students. They push students to learn subject matter that is seemingly unrelated to their previous experiences. Often these teachers scold students because they cannot learn or are not interested in learning. They view students not as individuals but as components of a group.

This dismal picture of course does not pertain to the majority of teachers. More and more teachers are learning to utilize the individual differences of students in constructing their curricula. Rather than being the sole judge of what will be learned, instructors are gaining knowledge of growth and development, student readiness, interests, and needs. The advantages in this type of planning for a teaching-learning situation are endless. Most important, such a situation involves the teacher in the act of becoming a more "tuned-in" participant in the classroom environment.

This pupil-centered approach is not without its critics. There are those who feel that information based on student interest often has little or no scientific support through research. Obviously there must be a healthy balance between the pupil-centered approach and the teacher- and subject-matter-centered approaches to curriculum planning and teaching.

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PART II

Setting the Stage for Teaching

Man thinking, him Nature solicits with all her placid, all her monitory pictures; him the past instructs, him the future invites. Is not indeed every man a student, and do not all things exist for the student's behoof? And, finally, is not the true scholar the only true master? But the old oracle said, "All things have two handles: beware of the wrong one."

Emerson

3

The Art of Planning

Walking into a classroom at any level without having first planned the day's objectives is like beginning an automobile trip with an empty gas tank. Like any task undertaken, teaching needs preparation. Unfortunately, this is not as easily accomplished as one may think. Research has indicated that basic to creative planning is the individual's ability to attain a full mastery of his subject, to be curious, open-minded, objective, and indifferent to conformity and to have an eagerness to experiment with new ideas. This person must also be willing to work long hours on demanding work.

One can see that the process of planning for creative teaching can become laborious. Ghiselin stated, "The sheer labor of preparing technically for creative work, consciously acquiring the requisite knowledge of a medium and skill in its use, is extensive and arduous enough to repel many from achievement."¹ Unfortunately, this is true too often.

What the instructor
expects the pupils
to learn

How the instructor
hopes to influence
this learning

Concept formation
Behavioral objectives
Selection of content

Organization of subject matter
Creative teaching
Creative use of instructional media
Teaching methods and techniques
Creative teaching applied

¹Brewster Ghiselin, *The Creative Process* (New York, Mentor Books, 1955), p. 28

Ten *concepts*—the major organizing elements of the curriculum reflecting the scope of health education.

Thirty-one *subconcepts*—the lowest conceptual level involving the supporting ideas, viewed in three dimensions, that serve as guides in selecting and ordering the subject matter in health education.

The key concepts. The three key concepts, or processes affecting health behavior, represent the highest conceptual level of the framework and serve as the unifying threads of the curriculum. Each of the concepts characterizes a process in the life cycle that is typical of every individual, regardless of sex, occupation, economic level, or social status. These include the following:

Growing and developing: A dynamic life process by which the individual is in some ways like all other individuals, in some ways like some other individuals, and in some ways like no other individual.

Interacting: An ongoing process in which the individual is affected by and in turn affects certain biological, social, psychological, economic, cultural, and physical forces in the environment.

Decision making: A process unique to man of consciously deciding to take or not take an action, or of choosing one alternative rather than another.

These three key concepts illuminate the overall concept of health and hence form a framework for health education. They represent a dynamic interrelationship which can be illustrated by the following example related to the use, non-use, or misuse of alcoholic beverages as the context:

In the *growing and developing* process that is living, the individual, during childhood, comes in contact with—*interacts* with—the phenomenon of alcoholic beverages—or, more specifically, with people who use them. At some point in the life of each individual, probably in the mid-teens, *interaction* leads to the necessity of making a *decision* about use or continued non-use of alcoholic beverages. If the *decision* is to try drinking, then other *interactions* take place—with the beverage itself, with others who drink, with those who do not, with society and the adult world and, in some way, with the individual's own self-concept and conscience. *Growing and developing* continues, of course, with this new element included. If one's reactions—physical, emotional, and social—to the beverage are basically more pleasant than painful, the individual may continue *growing and developing* as one who uses alcoholic beverages. If the balance becomes more painful than pleasant, the "tester" may decide to go back to abstinence. If the *decision* is to maintain abstinence, when drinking is a possibility, than still other *interactions* take place.

What are the basic ingredients of good teacher planning? Probably they can be reduced to those listed in the table on the previous page.

This chapter and the chapters that follow will be devoted to the preceding ingredients as they concern teacher planning. The present chapter will be concerned primarily with the objectives and content necessary to achieve these objectives in health education.

TEACHING AND LEARNING THROUGH CONCEPTS

Not only must a teacher know *how* to teach, but he must know what *ends* he hopes to achieve in his instruction. Problem solving is not the current method; concept formation is. According to Woodruff, a concept "is a relatively complete and meaningful idea in the mind of a person. It is an understanding of something."² To build concepts efficiently one must give the student the opportunity to learn specifics and then encourage the student to build the desired concepts or generalizations himself by inference from the data. One of the major roles of the teacher is to help the student to form meaningful and useful concepts.

How to Teach Concept Formation

Many concepts are developed without specific teaching. For example, young children form concepts by seeing certain qualities and relationships repeatedly in a number of successive experiences. In the course of several trials a child is able to develop a concept of *dog*, as distinguished from *man*. As he grows older he will be able to differentiate that there are different kinds of dogs, that there are men and women, that these individuals have names, and so on.

Unfortunately, however, many students are just as likely to form incorrect concepts. To avoid this the student must be encouraged to organize facts, symbols, and isolated experiences around a concept or conceptual scheme.

To gain insight into the conceptual approach, an excerpt has been provided from the School Health Education Study.³

The conceptual framework. Broadly the conceptual framework for the health education curriculum comprises three categorizations. These are presented in a hierarchy as follows:

Three broad *key concepts*—the highest conceptual level representing the unifying threads of the curriculum that characterize the processes underlying health.

²Asahel D. Woodruff, *The Nature and Elements of the Cognitive Approach to Instruction* (Salt Lake City: University of Utah, May 28, 1964) (Unpublished material).

³From R. K. Means, *The Conceptual Approach in Structuring the Health Education Curriculum* (Washington, D.C.: National Conference for School Health Education Curriculum Development, February 10, 1967), adapted from School Health Education Study, *Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press, 1967), pp. 15-26.

subject matter. Examples might be "health misconceptions about communicable diseases" or "the leading causes of death." These are satisfactory in that they include specific subject areas, but they do not imply what the student can do with these topics. Are the students to memorize various facts about these topics? Are they expected to find areas for further individual research after the lesson? An objective needs to be stated in terms of what an individual should do after the information is presented in a class.

Some of the following are statements which not only specify the content area in which the objective lies but also indicate what the students are to do with the information given by the instructor. Thus, "to develop understandings of label reading for consumer awareness" indicates how the behavioral aspects of the students will be influenced and in what content area. Similarly, "familiarity with the effects of drugs upon physical activity" covers both the behavioral and content areas. "To define a personal philosophy of health" implies that the students will be clarifying their individual feelings about health. Again the two aspects are included.

Many instructors further define the content and behavioral parts. In "familiarity with drugs," the content can include the various drug groups, amphetamines, hallucinogens, barbiturates, and alcohol. The behavioral aspect can be directed so that the students can be made to understand necessary facts, become aware of present social attitudes, gain insights about biological principles, gain independence in seeking reliable sources of information about drugs, and so on. Students must use such techniques in order to gain familiarity with the content. When an instructor further defines his original objective, he can more easily see the kinds of learning experiences and situations he must present to the students in order to accomplish the objective.

In 1948, the American Psychological Association conceived an idea by which educational objectives could be classified in such a way as to be useful and still general enough to be applicable to most areas of education. After eight years of individual and group work, the committee published the *Taxonomy of Educational Objectives, Handbook I: Cognitive Domain*. The association saw a natural organization for all types of good objectives, classifying them into three broad categories or domains. In the first, the *cognitive domain*, the objective is achieved through a progressive sequence of levels. The full sequence begins with knowledge and ends with evaluation¹ and can best be elucidated by questions.

Knowledge: What food nutrients do all of us need? In what foods may they be found?

Comprehension: Can you explain in your own words why we need

¹Benjamin S. Bloom (ed.) *Taxonomy of Educational Objectives* (New York, David McKay, 1956)

Insight into individual differences and ways of maintaining emotional and social well-being.

The *affective domain* is an active extension of the various subcategories of the cognitive domain. The two domains are compared in the original source, Volume II of the *Taxonomy*.¹

- | | |
|---|---|
| 1. The cognitive continuum begins with the student's recall and recognition of Knowledge, | 1. The affective continuum begins with the student's merely <i>Receiving</i> stimuli and passively attending to it. It extends through his more actively attending to it, |
| 2. it extends through his <i>Comprehension</i> of the knowledge, | 2. his <i>Responding</i> to stimuli on request, willingly responding to these stimuli, and taking satisfaction in this responding, |
| 3. his skill in <i>Application</i> of the knowledge that he comprehends, | 3. his <i>Valuing</i> the phenomenon or activity so that he voluntarily responds and seeks out ways to respond, |
| 4. his skill in <i>Analysis</i> of situations involving this knowledge, his skill in <i>Synthesis</i> of this knowledge into new organizations, | 4. his <i>Conceptualization</i> of each value responded to, |
| 5. his skill in <i>Evaluation</i> in that area of knowledge to judge the value of material and methods for given purposes. | 5. his <i>Organization</i> of these values into systems and finally <i>organizing</i> the value complex into a single whole, a <i>Characterization</i> of the individual. |

The comparisons given are seldom so easily dichotomized within a given objective and its intended results, but they illustrate how one continuing domain gives rise to another.

One can see that the affective domain includes

Objectives which emphasize a feeling, tone, an emotion, or a degree of acceptance or rejection. Affective objectives vary from simple attention to selected phenomena to complex but internally consistent

¹David R. Krathwohl et al. *Taxonomy of Educational Objectives, Handbook II: Affective Domain* (New York: David McKay, 1964), pp. 49-50.

vitamins and minerals? What problems may arise if the soil in which food plants are raised is not fertilized?

Application: How can we use what we have learned to improve our eating habits? How can we check to be sure we have a balanced diet?

Analysis: What is meant by the statement that this cereal contains one-half of the minimum daily requirements? Who can analyze this menu to find out if essential nutrients are included?

Synthesis: Who can organize what we have learned about vital nutrients into a set rule for good eating habits? What soil conditions are necessary to produce vegetables that contain vitamins and minerals?

Evaluation: Are the claims in this advertisement consistent with what we have learned about vitamins? Which of the three dinner menus on the chalkboard is best in terms of our criteria for balanced meals?

The cognitive domain may be described as including such behavior as remembering, reasoning, problem solving, concept formation, and to a limited extent, creative thinking. Objectives which emphasize remembering or reproducing something that has presumably been learned are included in this. Also included are objectives which involve solving some intellectual task for which the individual has to determine the essential problem. He must then reorder given material or combine it with ideas, methods, or procedures previously learned. Cognitive objectives vary from simple recall of material learned to highly original and creative ways of combining and synthesizing new ideas and materials.

Concepts, reasoning, generalizations, and scientific knowledge constitute the basis for sound health practices. *Specific objectives in the cognitive domain are for the students to gain:*

5. Takes precautions in avoiding disease and preventing the spread of disease.
6. Uses safety precautions in daily activities and avoids taking risks.
7. Refrains from purchasing drugs or health cures of unknown value.
8. Selects and eats balanced meals and abstains from the use of tobacco and unsafe drugs, such as narcotics.
9. Puts effective human relations skills to work and seeks to improve his mental health and that of others.
10. Takes an active part in school and community efforts for health improvement.
11. Uses the services of health specialists and agencies and respects health laws and regulations.

There are of course many opportunities for overlap in attempting to place a specific objective in one domain. The domains are not mutually exclusive. The teacher and/or the curriculum planner will do well to identify and classify concrete objectives in each of the three areas, realizing that distinctions should be made between problem solving and attitudes, between thinking and feeling, and between acting and thinking or feeling.¹⁰

An example of how these three domains may be used in planning objectives for health teaching will be illustrated here. In this example, one of the key concepts of the School Health Education Study Advisory Committee has been used.¹¹

KEY CONCEPT: GROWING AND DEVELOPING

Concept: Growth and development influence are influenced by the structure and function of the individual

Subconcept: Heredity prescribes the potential for growth and development. Physical dimensions include man as a unique biological entity from the moment of conception. Mental dimensions include the fact that heredity is important in intellectual and emotional development. Social dimensions include such things as strength, good looks, and robust health.

Long-range goals: (1) *Cognitive domain.* The student understands that potential for physical, mental, and social growth and development is established by heredity. (2) *Affective domain.* The student is aware that, although environment and personal choices affect growth and development, limits are established by heredity. (3) *Action domain.* The student improves personal health practices and makes wise decisions in order that growth and development may be optimal.

¹⁰Ibid

¹¹Ibid, pp 36-37

qualities of character and conscience ... a large number of such objectives ... (are) expressed as interests, attitudes, appreciations, values, and emotional sets or biases.⁸

The following are some specific objectives in the affective domain:

1. Interest in finding out how one's body functions, grows, and changes and how it can be used effectively in different activities.
2. Concern for the health and safety of others and oneself. Appreciation of the possible health hazards involved in the use of drugs.
3. Appreciation of the importance of mental, social, and physical well-being.
4. Appreciation of the need for periodic health examinations.
5. Appreciation of the role of health departments and other community health agencies in our society.
6. Interest in practicing good health and safety habits and in participating with other individuals and agencies in promoting good health for all.

The *Taxonomy* does not include the domain of *action* within its categories, but this third domain is used by health educators to indicate aspects of health behaviors that are applied to actual life situations.⁹ The behavior of the students cannot always be measured in terms of how they translate and utilize information, because some behavior is nonobservable and some cannot be measured until the student are in life situations outside the college. Thus, a student can be exposed to a body of information (cognitive), realize and place its implications within his individual character (affective), and also show that the values inherent in the information can be expressed through action.

The following are some behavioral manifestations of cognitive and affective goals which can be stated in objectives. These can be classified within the action domain. The student

1. Corrects procedures in personal grooming and in caring for the face, hands, and fingernails.
2. Practices desirable health behavior.
3. Uses effective methods in caring for the eyes, ears, nose, teeth, and throat.
4. Participates in recreational activities and gets adequate amounts of sunshine and fresh air.

⁸Ibid., p. 7

⁹School Health Education Study, *Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press, 1967).

tudes and practices and much pupil antagonism toward education. In many schools the pupil does not know or care what the teacher's objectives are. Worse, the teacher too often does not know or care what the pupil's objectives are. Because of this, teachers often cover the ground, go through the motions, and think that they have achieved their objectives when, in fact, they have achieved no educative results. The pupil has realized neither objectives of his own, nor those of the teacher.¹²

Another pitfall can occur when a teacher, intent upon fulfilling his educational goals, brushes aside a relationship seen and offered by a creative student. If the relationship is irrelevant, the teacher must attempt to show the student his error in a positive and helpful fashion. If the relationship does not fit into the well-organized pattern of the subject matter yet is actually a fresh insight, the teacher must vary his objectives to include the new relationship. The teacher should feel encouraged that his classroom atmosphere elicited such a response.

Representative Content Should Be Chosen The subject area of health is broad and in a constant state of flux because of new findings and advances in research. Selecting subject matter representative of content in a particular health curriculum is an awesome task at best. In order to be representative, the teacher is sometimes forced to select only major concepts, ideas, and skills for the student to use in gaining greater insights. Phenix illustrated this when he said,

from the large resources of material in any given discipline, those items should be chosen that are particularly representative of the fields as a whole. The only effective solution to the surfeit of knowledge is a drastic process of simplification. This aim can be achieved by discovering for each discipline those seminal or key ideas that provide clues to the entire discipline. If the content of instruction is carefully chosen and organized so as to emphasize these characteristic features of the disciplines, a relatively small volume of knowledge may suffice to yield effective understanding of a far larger body of material.¹³

Borrowing a concept from the School Health Education Study that the "use of substances that modify mood and behavior arises from a variety of motivations," one could say that in order to search for representative content to cover the drug area, the teacher may have to limit himself to those substances that are now in common use by young people. These would

¹²William H. Burton, *The Guidance of Learning Activities* (New York: Appleton Century-Crofts, 1962), p. 54.

¹³Philip H. Phenix, *Realms of Meaning* (New York: McGraw-Hill, 1964) p. 11.

SELECTION OF CONTENT

The next logical step in curriculum development is moving from stated objectives to the selection of subject matter. This is really the heart of the curriculum. A teacher or curriculum planner may spend months on this phase of preparation. A brief list of guidelines to observe in the selection of subject matter follows:

1. Objectives of the course should be observed.
2. Representative content should be chosen.
3. Content selected should be organized according to the logical development of the subject matter.
4. The content selected should be suitable to the students' interests and activities.
5. The content should be flexible.
6. The teacher must be aware of the degree of the students' readiness to learn new material.
7. Time allotment must be considered.

Further development of each guideline seems necessary at this point.

Objectives of the Course Should Be Observed. As was mentioned, basic to the entire success of the curriculum is the teacher's ability to formulate the expected outcomes of his class or subject. In establishing and utilizing course objectives the teacher should always keep in mind that objectives represent what he hopes his students will learn or achieve, not merely what they will do in the process of learning. Thus, for example, one of the objectives of a fourth-grade lesson plan in health is not to see a film on nutrition, but to learn the relationship between vitamins and good health. Viewing the film is an activity.

While using objectives as a basis for selection of subject matter, it should be remembered that the teacher's objectives should not be confused with behavioral objectives. Burton, in his text on learning, discussed this point by stating,

The teacher's objectives and the pupil's objectives in any learning situation are not similar in form, but they are intimately related. The teacher's objectives are the desirable educational outcomes . . . which he hopes the pupil will achieve. The pupil's objectives are the immediate results which he sees and desires and which will result from his activity in solving the question in which he is interested. The teacher hopes so to guide the learning experience that desirable educational results (the teacher's objectives) will be achieved while the pupil is achieving his objectives. Failure to realize the difference and relation between teacher's and learner's objectives has caused not only much ineffective and useless teaching but has developed detrimental atti-

the secondary school level, they feel that courses should be organized psychologically (around the student rather than around the subject matter).

In arranging the course content around the interests and activities of the students, suggested guidelines can be considered.

1. Teachers must keep themselves "tuned in" to the interests and activities of their students.
2. Because all pupils are not alike, the teacher must be prepared to provide alternate experiences for each topic.
3. The teacher must have a personal rapport with his students.
4. The teacher must be open to content suggestions from his students.

An excellent example of one teacher who had a tuned-in ear can be found in *Teacher* by Sylvia Ashton-Warner. By knowing and planning for the needs and interests of the small Maori children, she could evoke originality, achieve educational goals, and at the same time keep a relative amount of order amid chaos. Mrs. Ashton-Warner discovered very quickly that the children refused to become interested in the activities of Dick and Jane in the basic reader. Reversing her methodology of using the basic book first, she encouraged them to compose their own "books." These frequently contained stories about skeletons, kissing, witches, getting drunk, and fights with mommy and daddy. The children, needing other words to connect and make their stories complete, gradually learned most of the vocabulary included in the Dick and Jane series. Her methods can be applied in health as well. If a teacher in a health class senses the class before him is exceedingly restless during a unit on nutrition, could it not possibly signal that there is no need for such stress on that particular aspect of health at that time? When, instead, the class becomes alert and inquisitive during the discussion of drugs, would this not be a good time to extend those discussions? A teacher can learn much of the needs of his class through their questions and reactions and can make new plans for each class, if necessary, in order to help the students discover for themselves the important issues in health.

One relatively simple way to tap the interests of students is to ask them to list some questions they would like to have answered during class. This has been done quite effectively in many schools. An example can be seen in these questions that fifth- and sixth-grade children ask about drugs.¹⁶

1. What does LSD stand for?
2. Where do drugs that people use come from?
3. Do people who sell drugs use them?

¹⁶ Questions were compiled from over 100 fifth- and sixth grade students at Crocker Farm Elementary School in Amherst, Mass., 1969.

include alcohol, tobacco, certain stimulants and depressants, and psychedelic drugs. By discussing a representative few within these major groups, the teacher can elicit from the students such discoveries as the relationship between these substances and health, how drugs modify mood and behavior, how they influence the individual psychologically, and relationships between these substances and an individual's needs.

The Curriculum Should Be Organized According to the Logical Development of the Subject Matter. Each learning experience should be built on the previous learning experience of the student; each new learning experience should develop a basis for performance required in subsequent learning experiences. In other words, the teacher should know where he and his class have been and where they are going. This continuity is especially important in the case of building attitudes and behavior. Both take time and gradual development.

It should be explained here that a learning experience is not confined merely to subject content. It "refers to the interaction between the learner and the external conditions in the environment to which he can react."¹⁴ This does not mean that each student will necessarily assimilate all that the teacher provides. No matter what content is presented or who presents it, the student is ultimately the one who is the determiner of what the experience will involve.

Maintaining continuity in curriculum planning also implies that learning experiences proceed from the concrete to the abstract, and from tasks requiring simple thought processes to those requiring abstract and formal reasoning. The following situation shows an example of this continuity: A teacher wanted to present a unit on growth and reproduction. In doing this she decided first to discuss early sexual development, starting from birth to adolescence. Next she covered the reproductive organs of the male and female, including a discussion of their functions. She felt it appropriate to bring up some normal sexual outlets of young people (masturbation, nocturnal emissions, and so on). She ended the unit by discussing ovulation, menstruation, fertilization, conception, pregnancy, and birth. The unit had completed a cycle and ended where it had begun. In this way the students were exposed to a pattern of the normal developmental stages that take place in growth and reproduction.

The Content Selected Should Be Suitable to the Students' Interests and Activities. Clark and Starr feel that a course can be organized in one of two ways: (1) "according to the logical development of the subject matter or (2) according to the psychological development of the pupils."¹⁵ At

¹⁴Tyler, *op. cit.*, p. 41.

¹⁵Leonard H. Clark and Irving S. Starr, *Secondary School Teaching Methods* (New York: Macmillan, 1967), p. 102

he makes a few of his lesson plans elastic enough, he can expand or shorten certain phases of his plan at will.

An example of the amount of time that certain subjects may take is shown in the curriculum bulletin of the Cincinnati Public Schools.

Units of Work Arranged by Grades*

	Approximate Number of Class Periods
<i>Grade 10</i>	
I. Personal hygiene	9
II. Driver education	<u>36</u>
(one semester)	45
III. Physical growth and development	9
IV. Social and emotional growth	9
V. Nutrition	9
VI. Social hygiene	5
VII. Use of drugs, cosmetics, and health appliances	<u>4</u>
VIII. School and community health resources	(one semester) 45
<i>Grade 12</i>	25
I. First aid	<u>20</u>
II. Family health and home nursing	(one semester) 45
III. Mental hygiene	15
IV. Marriage and family living	25
V. Recreation and body mechanics	5
VI. Driver training (optional)	<u>45</u>
(one semester)	45

*From *Health and Safety: Senior High Schools*, Curriculum Bulletin 233 Cincinnati Public Schools, Cincinnati, Ohio

SOURCES OF INFORMATION IN CHOOSING CONTENT

There are many sources of information that can be utilized in determining course content. In fact, it should be emphasized that as many sources as possible *should* be utilized to eliminate bias, errors, and misconceptions. The latter creep into curriculum guides as well as daily lessons and must be eliminated by careful use of current materials. Many and varied sources also offer the teacher a choice of those topics which will help most to achieve the particular objective of the curriculum. Through the use of many resources, one is also able to recognize those areas and subjects which overlap and those that possibly need more exposure.

4. What is the most popular drug that people use?
5. Is LSD ever helpful to man?
6. Can LSD kill people under age 12?
7. How does glue sniffing make you high?
8. Is marijuana as dangerous as LSD?
9. Why do people take drugs?
10. How were drugs invented?
11. Are drugs harmful to animals?
12. What good are drugs?

An important factor to keep in mind is that the teacher must instruct in a manner that will enable her students to use their information, not merely remember it. If the knowledge presented is appealing and the pupils can be properly motivated, the class will develop the proper attitudes through practical application of the information.

The Content Should Allow for Flexibility. Although the curriculum cannot always be changed at will, it should not succumb to inflexibility. The teacher should always plan for unforeseen developments which can and will appear from time to time. Plans often need to consider schedule changes; world, national, or local events; visiting lecturers; and so on.

The Teacher Should Be Aware of the Readiness of the Students to Learn New Material. The term *readiness* is also an important consideration in teacher planning. When is the best time to introduce a new learning experience to students? The wise teacher will be careful to appraise the level of readiness of each pupil for new material and consider how and when he can take the next step.

These individual readiness levels become less and less defined as pupils get older. The first-grade teacher has a much wider range of readiness levels in her class than does the senior high school instructor. Elementary teachers generally realize that it is necessary to keep pupils' physical and mental developments and capacities in mind, whereas secondary and college teachers look for more subtle readiness cues. Introducing a unit on sex education before the teacher knows the background and prejudices of students (and their parents) can prove disastrous. The ability to judge when a class is "ready" should not be taken for granted, but can be developed by observant, sensitive teachers.

Time Allotment Must Be Considered. One of the main criteria to be considered in the selection of subject matter is time. All good teachers ask from time to time, "How am I going to fit it all in?" Even when one is able to determine the amount of time available for teaching a given subject, the teacher is plagued with such things as unscheduled days out of school, special school activities which remove various students from the classroom, and so on. To overcome this the teacher should do his planning, keeping in mind the possibility of unexpected interruptions throughout the year. If

4. The purposes and functions of the family
 - a. the importance of the family to the mother
 - b. the importance of the family to the father; what is the role of the father in family living?
 - c. the importance of the family to the children
 - d. the importance of the family to the community
5. Making adjustments within the typical family unit
6. Different families have different approaches to family living
 - a. approach to health; the health status, attitudes and practices of each family member influence the lives of all family members
 - b. approach to discipline
 - (1) parental controls
 - (2) developing one's own controls—self-discipline and responsibility
 - c. ways of expressing love and concern
 - d. religious attitudes and customs¹⁷

A second example is the *Health Instruction Guide* for the North Dakota schools, which outlines the relative emphasis that should be placed on health knowledge, attitudes, practices, and skills by grade levels for the major health areas.

	Grade*						Jr. ^b High	Sr. ^c
	1	2	3	4	5	6		
Community Health				XX	XX	XX	XX	XX
Consumer Health				X	XX	XX	XX	XXX
Disease Control				XXX	XX	XX	XX	X
Family Living	X	X	XX	XX	XX	XXX	XX	XXX
Mental Health	X	X	X	XX	XX	XX	XXX ²	XX
Personal Health ¹	XX	XX	XX	XX	XX	XXX	XX	X
Safety and Accident Prevention	XX	XX	XX	XX	XXX	XX	XXX	XX ³

Note xxx = Major emphasis on this area at this grade level

xx = Moderate emphasis on this area at this level

x = Some attention, particularly to attitudes and practices rather than to knowledge

Blank = No attention to this area at this grade level

* = One semester or the equivalent at each level

1 = Including community health and disease control in grades 1-3

2 = Preferably late junior high school

3 = First Aid

^bFrom *Health Instruction Guide, North Dakota Schools, Department of Public Instruction*
Bismarck, N D, 1965, p 6

¹⁷American School Health Association, *Journal of School Health*, Kern, Ohio May, 1967,
pp 59-60

Textbooks, journals, vital statistics, curriculum research, courses of study, surveys, school health examinations and records, school personnel, special television programs, pupil interest inventories, and health knowledge tests provide excellent sources of information for curriculum development. These cannot be chosen at random. Three suggested criteria follow:

The Content Chosen Should Be Based on the Latest Findings and Research. Such periodicals as the *Journal of School Health* and the *Journal of Health, Physical Education, and Recreation* will, from time to time, present articles and current research findings relevant to health education. These journals also present new and innovative ideas for teaching in health.

The teacher can conduct research within the school in which he is teaching. Information can be gathered from such sources as the school physician, nurse, principal, cafeteria personnel, and physical education teacher on such subjects as school accidents, sickness, nutrition, and absences from school. The teacher can independently construct interest inventories and administer health knowledge tests within the classroom.

Courses of Study and Curriculum Guides Should Be Consulted. These aids not only are valuable in helping the teacher to determine what content should be covered but also help to decide the sequence of topics. Many courses of study and curriculum guides outline in great detail suggested topics and sequences. An example is the May, 1967, issue of the *Journal of School Health*, which devoted its entire issue to a suggested program of sex education for grades K through 12. One outline for grade 7 on "The Family" was as follows:

A. Teachable Material

1. Family structures

a. the "typical" family in the United States

- (1) monogamous marriage
- (2) household consists of only mother, father, children

b. other kinds of families in our culture, e.g.:

- (1) the one-parent family
- (2) families in which persons of several generations live as a single family unit within the same household
- (3) families in which children live with someone other than either one or both of their parents
- (4) families in which there are no children

2. Why did the family, as such, develop?

- a. influence of ancient civilization
- b. current environmental influences

3. How have families in the United States developed and changed over the years?

- a. ways in which they have changed
- b. forces influencing these changes

- Oberteuffer, Delbert, and Mary K. Beyrer. *School Health Education*. New York: Harper & Row, Publishers, 1966.
- Petersen, Dorothy G. *The Elementary School Teacher*. New York: Appleton-Century-Crofts, 1964.
- Rucker, W. Ray. *Curriculum Development in the Elementary School*. New York: Harper & Row, Publishers, 1960.
- Smith, James A. *Setting Conditions for Creative Teaching in the Elementary School*. Boston: Allyn and Bacon, Inc., 1966.

Textbooks Should Be Utilized. Just as courses of study and curriculum guides can be useful in curriculum development, so can textbooks help in the selection of content. They can afford the beginning teacher the opportunity to observe the sequence in which the content can be placed. Before relying too heavily on any one textbook, though, the teacher will do well to consider that:

1. The sequence in which the material has been placed in a given text may not necessarily be the best order for a particular class.
2. All chapters should not be considered as having equal importance.
3. Some of the material presented may be out of date.

SUMMARY

Certainly not all the important factors that are involved and worth considering in effective planning of the curriculum have been covered here. Unexpected problems will always arise. It is sufficient to say that if the teacher is creative enough and competent in the area of health knowledge, then the problems that do arise will be minor in their effect on the overall program. Stress is mainly placed on the importance of good teacher planning. Objectives should be designated prior to the organization of subject matter and the organization of subject matter of course should be used to reach these stated objectives.

It must be stressed again that no single source of information can be considered adequate in providing information relevant to course content. Each and every source available to the teacher or curriculum committee should be given consideration in planning any comprehensive curriculum. How the resulting learning experiences will be absorbed by the students will be examined in the next chapter.

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significant understanding which will modify the behavior of the learner and enable him to adjust to a life situation more effectively."¹

Adams writes that, "The unit of work consists of unified coordinated elements, each of which is a part of the functional whole. Each of these major elements is an organized aspect of the total unit."²

Burton gives the following definition of a unit: "A unit is any combination of subject-matter content and outcomes and thought processes into learning experiences suited to the maturity and needs (personal and social) of the learners, all combined into a whole with internal integrity determined by immediate and ultimate goals."³

The unit has been defined by the *Dictionary of Education* as, "An organization of various activities, experiences, and types of learning around a central problem, or purpose, developed cooperatively by a group of pupils under teacher leadership; involves planning, execution of plans and evaluation of results."⁴

Thus it can be noted that the modern notion of the unit is based upon a Gestalt type of psychology, in which figure-field relationships are important. Such relationships mean the association of one element or item with another and organization around one central theme. The unit of work is organized on a psychological basis—what is meaningful to the students.

To observe more closely the internal aspects of the unit, it would be helpful to cite the six essential elements of the unit as given by Blount and Klausmeier.

Framework for a Teaching-Learning Unit¹

I. Introductory statement

- A. State the age, grade level, and ability grouping, if any, for which the unit is planned.
- B. Estimate the length of time that is needed for the unit.
- C. Indicate briefly the over-all plan into which this unit fits.

II. Outline of objectives

- A. State the specific concepts, facts, and generalizations that students will acquire.

¹A. Hanna Lavone, Gladys L. Potter, and Neva Haganan, *Unit Teaching in the Elementary School* (New York: Holt, 1955), p. 103.

²Fay Adams, *Educating America's Children* 2nd ed. (New York: Ronald, 1954), p. 140.

³William H. Burton, *The Guidance of Learning Activities* 3rd ed. (New York: Appleton-Century-Crofts, 1962), p. 329.

⁴Carter V. Good (ed.), *Dictionary of Education* (New York: McGraw-Hill, 1959), p. 387.

⁵"Framework for a Teaching-Learning Unit" from *Teaching in the Secondary School*, 3rd edition by Blount and Klausmeier, pp. 200-201. Copyright © 1953 by Harper & Row, Incorporated. Copyright © 1958 by Herbert J. Klausmeier. Copyright © 1968 by Nathan S. Blount and Herbert J. Klausmeier. Reprinted by permission of Harper & Row, Publishers.

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Organization of Subject Matter

After objectives and the selection of content, the next logical step in the planning process is that of organizing subject matter, teaching techniques, and teaching devices, as well as creating an environment in which effective teaching and learning situations will be possible. As previously stated, prior to this point in teacher planning, most teachers will designate specific course objectives and select and arrange the course content in order to meet these objectives. From this point the teacher will begin to sketch in lightly the work that will be covered in a semester or quarter and then proceed to plan the major units of work around which the daily and weekly lesson plans will revolve.

The vast explosion of knowledge in health, as well as in other subjects, presents a tremendous challenge to elementary and secondary teachers, principals, and supervisors to select and organize tentative learning experiences of young people—experiences that will be adequate and effective for living healthfully. (See Chapter 2.) Educators generally agree that unit planning in teaching is one of the best ways to provide for learning experiences on a sufficiently broad base.

In order to help the reader decide what constitutes a good unit, several definitions are cited. One group of authors states, "A unit, or a unit of work, can be defined as purposeful learning experience focused upon some socially

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- B. List the specific skills that students will develop.
- C. List the specific attitudes that students will develop.
- III. Content outline
 - A. Outline the major subject-matter content, and/or
 - B. Outline the problems to be solved, and/or
 - C. Outline a series of projects to be completed.
- IV. Learning activities
 - A. Initiatory activities
 - 1. Outline a series of activities that will get the students off to a successful beginning; using your ideas as to how to initiate a good teaching-learning situation, indicate the sequence of these activities.
 - 2. Indicate the approximate amount of time required for initiating the unit.
 - B. Developmental activities
 - 1. Outline the activities in which the students will engage to acquire concepts, skills, and attitudes; indicate the successive steps students go through in learning a concept or skill in the order in which you think these best learned.
 - C. Culminating activities
 - 1. Outline a summarizing activity or group of activities that each student can contribute to, that the whole group will direct its effort toward during the major part of the learning period, that will best satisfy each student's need for approval from classmates and others, and that will promote good attitudes toward classmates, teacher, school, and subject matter.
 - 2. Indicate the time needed for this phase, allowing for appropriate student participation.
- V. Materials and resources
 - A. Locate reading materials, audio-visual materials, and demonstration and experimentation materials that are needed to make the activities worthwhile.
 - B. Locate and list facilities that will be used in the school (outside the classroom) and in the community.
 - C. Devise procedures for bringing people from the community to the classroom and for taking the students into the community.
 - D. Outline the procedures you will use when it is necessary for students to contact persons or to secure materials outside the classroom.
- VI. Evaluation procedures
 - A. Outline the procedures you will employ to determine where

students are when the unit starts.

- B. Outline the methods you will use in assisting students to measure their own progress as the unit develops.
- C. Outline the procedures you will use to measure student growth in concepts, facts, skills, and attitudes when the unit ends.

THE UNIT AS IT RELATES TO THE NATURAL EDUCATIVE EXPERIENCE

Other writers have, in outlining what they feel are essential elements of the unit, agreed with those proposed by Blount and Klausmeier. As you read over the elements again, you will note that there is nothing arbitrary in the organization of a unit. Each element is considered in an organized fashion, which is based on what we now know about the natural learning process. This can be illustrated by using the sequence of steps in the learning process developed by Woodruff and comparing them with the elements of a teaching-learning unit proposed by Blount and Klausmeier.

The introductory statement is important to the teacher at the beginning of a unit, as it will define vital guidelines necessary for integration or coordination of the unit with others and can provide a tentative time table to which she can refer while making daily plans. At the same time, outlining objectives will prove necessary for the justification of teaching the unit. Having these written goals speeds the preparation of activities and project planning. In addition, the students can better define their personal goals if the teacher has clearly defined her objectives. Not knowing to what end a lesson is progressing (or for what reasons it has been given) can result in students acquiring negative attitudes toward all formal education. Ironically enough, this happens even in cases where a teacher is given suggested objectives in a thoughtfully prepared curriculum guide. If the objectives are not studied carefully (whether a teacher or curriculum committee has prepared them), the purposes for which the unit is taught are nebulous, resulting in an educational setback rather than an intellectual and social gain. Unfortunately, the educational uncertainties experienced by the pupils in such a unit as the one described makes it more difficult for Step 1 to occur.

Normally, when Step 1 does occur, "Motivation within the learner makes him receptive to stimulation," the teacher can maintain the students' levels of stimulation, or raise them, if he has carefully planned appropriate learning activities. (Item IV, p. 62.) These should be timed so that interest is not lost before "a goal becomes related to the motivation" (Step 2). As the motivating activities present problems that the students cannot immediately solve, the necessary tension arises, which Step 3 describes. The elements of content outline, item III, and learning activities, item IV, are important to the learners involved in Step 4. Teacher guidance is important at this point, as many vital skills in communication, deductive and inductive reasoning, research methods, and so on, are utilized during this stage. Again, objectives must be

TABLE 4-1
Sequential Steps in Learning*

1	2	3	4	5	6
Motivation within the learner makes him receptive to stimulation	A goal becomes related to the motivation. A. The goal is not at once attainable. B. A barrier exists.	Tension arises. A. Energy is released within the learner; he is ready to act. B. The barrier prevents an appropriate discharge of the energy and creates tension.	Learner seeks an appropriate line of action to reach goal A. In every situation there are a number of possible ways of acting. B. The selection of one of those ways of acting will involve elements of chance and/or analysis C. When the selection is made action toward the goal is attempted. D. If the selected line of action is inappropriate steps A, B, and C will be repeated until an appropriate action occurs. E. When an appropriate action occurs it will involve: 1. Some degree of success in terms of the goal. 2. A sense of satisfaction and a reduction of tension to the extent that the motive is satisfied.	Learner fixes the appropriate line of action A. Skills are acquired by drill or practice B. Concepts are developed by becoming familiar with the referent. C. Memorization is accomplished through meaningful repetition. D. Tastes and preferences are established by the satisfyingness or annoyingness of the experience. E. Ability to solve problems is a product of A and B above.	Inappropriate behaviors are dropped. A. Yielding no satisfaction, they lose attractiveness.
Speed of Learning Varies A. May be relatively sudden. B. May be very slow. C. Depends on: 1. Nature of the problem. 2. Degree of motivation. 3. Capacity of the learner.					

*Asahel B. Woodruff, *The Psychology of Teaching*, 3rd ed. (New York, Longmans, Green and Company, Inc., 1951), p. 241. Courtesy of David McKay Company, Inc.

clarified so that students will gain the benefits of the knowledge discovered.

The results of Steps 5 and 6 become good indicators of the *evaluation procedures* which the teacher outlined prior to beginning the unit. They also are an indication of whether the subheadings under *materials* and *resources* were adequate. *Culminating activities* should further enable both students and teacher to evaluate the success of the learning experience.

TYPES OF LESSON PLANS

In many schools today the unit is the typical way of organizing a learning situation. If one were to read any number of educational texts, he would find many of the authors talking in terms of resource units, teaching units, descriptive units, appreciation units, process units, and other special-purpose units. The reader should not let this terminology overpower him. These titular variations are due to differences in the students, teachers, educational philosophy, curriculum, cultural environment, and part of the country in which the schools are located. For our purposes, we will examine those types of units which may assist teachers and others in planning and teaching.

The Resource Unit

Klohr has defined the resource unit as "a carefully planned series of suggestions centered in some broad problem, topic, or area of experience and organized to serve as a source of ideas, materials, and procedures to help a teacher in preplanning a learning unit."⁶ This resource unit is quite often prepared by a group of teachers to be used with any group of children of appropriate age and grade levels. Some units may be prepared by a group of teachers in cooperation with curriculum consultants. These units usually contain a wealth of material, ideas, and suggestions from which a teacher may select when working with a given group of pupils. They may become part of a course of study or be published in order that other schools and school systems can use them as a source of reference.

Krug suggests that the format for a resource unit include the following parts:

- I. Significance of the topic or area
- II. Inventory of possible objectives
- III. Content outline (expository outline, list of questions or problems or both)
- IV. Suggested activities
 - A. Introductory
 - B. Developmental
 - C. Culminating

⁶J. Galen Saylor and William M. Alexander, *Curriculum Planning for Better Teaching and Learning* (New York: Holt, 1964), p. 403

- V. Bibliographies and lists of materials
- VI. Suggested evaluation procedures⁷

In order to examine what constitutes each part, it will be necessary to examine them individually. You will notice that the areas are similar to the elements of a unit suggested by Blount and Klausmeier.

Significance. The importance of the unit for the students is pointed out here, as well as its sequential place in the structure of other subject fields involved. An example that can be used in illustrating this and the other steps in a resource unit can be given in a fifth-grade unit on family life or sex education.

The importance of sex education: The American School Health Association states that "As long as there is growth and change in the individual and the community, there is need for sex education which will prepare one to accept these changes with equanimity and contribute to one's salutary interaction in a heterosexual society.

"Although sex education begins in the home and is the parents' privilege and responsibility, schools have some obligation to make room in their curricula for those courses of study which will strengthen character and contribute to development toward well balanced responsible citizenship."⁸

Objectives. Objectives should relate to the specific unit being planned and not to the whole range of objectives for the subject field or fields involved. Usually a few of the most significant objectives for a given unit are adequate and much more effective and usable in carrying out a unit than a long list of goals. This list of objectives should encompass the areas of knowledge, attitudes, and behavior.

Some general objectives that may prove suggestive in sex education for fifth-grade students are the following:

1. To develop an acceptable scientific vocabulary useful in describing body parts and processes.
2. To develop a knowledge of how reproduction occurs and life begins.
3. To understand that heredity and environment influence growth and development.
4. To develop an awareness that each individual grows and develops uniquely according to a "timetable" which follows a predictable sequence.

⁷Edward A. Krug, *Curriculum Planning*, rev. ed (New York: Harper, 1957), p. 236

⁸Committee on Health Guidance in Sex Education, "Growth Patterns and Sex Education," *The Journal of School Health*, Vol. XXXVII, No. 58, May, 1967, p. 1.

5. To be familiar with the changes that take place as the individual advances from childhood to adulthood.
6. To differentiate between the role of the male and female in the conception, birth, and nurture of a human being.
7. To develop an awareness of the importance of the family structure to the individual members.⁹

Content. The content of a given unit may be indicated in a number of ways. Often it is presented through a series of "Problems for Developing the Unit." If these problems are carefully formulated and take into account the structure of the subject matter, they can be most effective. This method of indicating the content of a unit provides good leads for the use of problem-solving methods and experiences in the classroom.

The following is an illustration of an outline for a family-life-education program used in the Oakland Public Schools for grades K through 12.

I. *The Person*

Unit A. Stages of Life (Growth and Development)

1. Infancy and Childhood
2. Adolescence
3. Adulthood
4. Aging

B. Interpersonal Relations

1. Needs and Competencies of Individuals
2. Interaction of Individuals (with each other or in the group)

C. Health and Safety

1. Early Sexual Characteristics
2. Physical Fitness
3. Mental Fitness
4. Safety and First Aid

D. Human Sexuality

1. Early Sexual Characteristics
2. Sexual Maturity
3. Sex in Marriage
4. Sex Changes in Aging

E. Preparation for Marriage

1. Preparation for Marriage and Parenthood
2. Marriage
3. Parenthood and the Family Life Cycle

⁹*Sex Education—Resource Unit for Grades 5, 6, or 7* The American Association for health, Physical Education, and Recreation, 1201 Sixteenth Street, N.W., Washington, D.C., 1967

II. *The Family*

A. Family Membership

1. Primary Tasks of Families
2. Similarities and Differences between Families
3. Changes that Affect the Family
4. Effect of Residence on Families

B. Family Relationships

1. Socialization of Family Members
2. Developmental Tasks in Marriage and Parenthood

C. Family Economics and Management of Resources

1. Essential Factors in Family Management
2. Procedures and Techniques
3. Influencing Factors

D. The Family in the Community

1. Family Responsibility and Obligation to Community
2. Rights of the Family as Community Members
3. Privileges of Living in a Community¹⁰

Suggested Activities. Activities are an important aspect of the resources unit. Many kinds of activities should be included. Above all, the planners should be certain that a balance is attained in the kind of activities suggested. Among those listed should be introductory, developmental, and culminating experiences.

The introductory experiences should provide several ways in which the students can become acquainted with the subject matter. These may include films, filmstrips, and other audio and visual aids, discussions of current events relating to the topic, trips, guest speakers, experiments, observations, and problem solving.

Some suggested activities for a sex-education resource unit are briefly sketched here.¹¹

- Collect magazine pictures of boys and girls of approximately the ages of fifth-graders to use in making a bulletin board display illustrating differences in size and body build among children of the same age. Investigate reasons for differences.
- Have male and female guinea pigs in the classroom. If possible breed a black guinea pig with a white one to observe hereditary characteristics in off-spring. Describe observations on birth.
- Discuss reasons for using scientific terminology rather than "pet" family expressions or peer slang in the study of sex education.

¹⁰Rita M. Hase "The Interagency Interdisciplinary Approach to Family Life Education," *California School Health*, Vol. 3 No. 1, January, 1967, pp. 28-29.

¹¹Emerson *Journal of School Health*, op. cit., pp. 35-39. *Sex Education: Resource Unit*, op. cit., pp. 4-5.

- Through a lecture-discussion, start with the basic structural unit, the cell, and "build" a person. Include in the dialogue an analogy between the human body and a building. cells—bricks; tissues—walls; organs—rooms; systems—apartments; and organism—building.
- Have students write brief essays on topics such as "Qualities I Like in Other Boys and Girls My Age," "The Personality of My Best Friend."
- Visit the local health or science museum to view exhibits dealing with body systems and the reproductive process.
- View and discuss films.
- Have a guest speaker (doctor, nurse) talk on some aspect of reproduction.
- Have buzz groups on (a) ways of showing love and respect for friends, (b) ways of showing love and respect for members of my family.
- Stage a sociodrama, with students portraying characters exemplifying different rates of growth and development.

Many resource units suggest ways in which a unit may be enriched and brought to a close. Such activities are labeled "culminating" or "concluding" activities. Not every unit must close with such projects: nevertheless, these activities provide excellent means for reviewing, evaluating, and summarizing what has been accomplished through the unit experience and serve as a basis for determining next steps.

- Have a "college bowl" game, with the questions covering what was presented and discovered in the unit.
- Discuss the relative importance of what has been learned in this unit in relation to the development of a healthy personality.
- Have students prepare a report which summarizes how their attitudes have changed (if they have) since they have participated in the unit.
- Have the students prepare a play, assigning roles to the various elements of an organism—cell, tissue, etc. Each could bring up interesting features about himself and his connection or relationship to other features.
- Develop a cartoon-type bibliographical story which contrasts the life cycle of a male with that of a female.
- Develop a "what would I have done" series on film (8 mm), built around growth and development differences in people of all ages.

Bibliographies and Materials. It is customary and helpful to include lists of materials and necessary equipment in most resource units. Here may be listed textbooks, supplementary books (fiction, biography, nonfiction),

reference books, reproductions of art, films, filmstrips, references for the teacher, and other materials and sources of materials for the unit.

The outline of materials used in our unit on family life includes the following:

Films

- The Day Life Begins.* Carousel Films; 1501 Broadway; New York, N.Y. (23 min.).
Everyday Courtesy. Churchill Films; 6671 Sunset Blvd.; Hollywood, Calif.
Exploring Growth. Churchill Films; 6671 Sunset Blvd.; Hollywood, Calif.
Growing Up. McGraw-Hill Book Company; Text Film Preview. Library; Distribution Center; Hightstown, N.J. (10 min.).
Miracle of Reproduction. Sid Davis Productions; 1418 N. Highland Ave.; Hollywood 28, Calif. (15 min.).
Story of Menstruation. Kimberly-Clark Corp.; Neenah, Wis. (10 min.).

Sound Filmstrips

- Especially for Boys.* Sylvexler Film Productions; 801 Seward Ave.; Los Angeles, Calif.
Human Reproduction. Eye Gate House, Inc.; 146-01 Archer Ave.; Jamaica, N.Y.
Reproduction in Flowers. Eye Gate House, Inc.; 146-01 Archer Ave.; Jamaica, N.Y.

Books for Students

- Dickerson, Roy. *Into Manhood.* New York: Association Press, 1954.
 Lerrigo, Marion, and Michael Cassidy. *A Doctor Talks to 9-12 Year Olds.* Chicago: Budlong Press, 1964.
 Levine, Milton, and J. H. Seligmann. *The Wonder of Life.* New York: Golden Press, Inc., 1964.
 Power, Jules. *How Life Begins.* New York: Simon & Schuster, Inc., 1965.
 Wilson, Charles and Elizabeth. *Growing Up.* Indianapolis, Ind.: Bobbs-Merrill Co., Inc., 1966.

Pamphlets

- Accent on You.* Tampax Incorporated; Education Department; New York, N.Y.
A Boy Today—A Man Tomorrow. Optimist International; 4494 Lindell Blvd.; St. Louis, Mo. 63108.
Growing Up and Liking It. Milltown, N.J.: Personal Products Corporation.
 Lerrigo, Marion, and Dr. Milton Senn. *A Story About You.* American Medical Association; 535 North Dearborn Ave.; Chicago, Ill.
Very Personally Yours. Kimberly-Clark Corporation; Neenah, Wis.
World of a Girl. Scott Paper Co.; Home Service Center; International Airport; Philadelphia, Pa.
You're a Young Lady Now. Kimberly-Clark Corporation; Neenah, Wis.

Teacher References

- Chanter, Albert A. *Sex Education in the Primary School.* Macmillan and Co., Ltd.; Little Essex St.; London WC2, England; 1966.
 Currah, Ann M. *Best Books for Children.* R. R. Bowker Co.; 1180 Ave. of Americas; New York, N.Y.; 1967.

- Gottlieb, Bernard S. *What a Boy Should Know About Sex*. Bobbs-Merrill Co.; Indianapolis, Ind.; 1961.
- . *What a Girl Should Know About Sex*. Bobbs-Merrill Co., Indianapolis, Ind.; 1961.
- Growth Patterns and Sex Education. A Suggested Program K-12*. The Journal of School Health Association; 515 East Main Street, Kent, Ohio, Vol XXXVII, No. 5a; May, 1967.
- Family Life Education Bibliography of Selected Books, Pamphlets, Curriculum Guides and Materials Since 1960*. California State Department of Education, Bureau of Homemaking Education, 721 Capitol Mall, Room 407; Sacramento, Calif.
- Hook, Andrew J. *Sex Education Curriculum*. Aurora Public School, East Side District 131; Aurora, Ill.; 1966.
- Mangan, Kenneth. *Social Hygiene Guide—Family Life and Development*. Illinois School for the Deaf; Dept. of Children and Family Services; Jacksonville, Ill.; 1966.
- Reading Materials on Aspects of Sex Education for Parents and Children*. Health Education and Welfare; U.S. Dept. of Health, Education and Welfare Administration Children's Bureau; Washington, D.C., 1966.
- Reference List of Resource Materials in Child Development and Family Life for Classroom Use in Elementary School*. Contra Costa County schools, 75 Santa Barbara; Pleasant Hill, Calif.
- Reik, Theodor. *What Shall I Tell My Child?* Crown Publishers, Inc., 419 Park Ave South; New York, N.Y.; 1966.
- Sex Education Guide for Teachers*. Family Life Education Program, Flint Community Schools; Flint, Mich.; 1967.
- Sex Education and the New Morality*. Child Study Association of America, 9 East 89th St.; New York, N.Y., 1967.
- Sex Education—Resource Unit for Grades 5, 6, or 7*. The American Association for Health, Physical Education, and Recreation; 1201 Sixteenth St., N.W., Washington, D.C., 1967.
- Special Issue: Human Sexuality and Education*. California School Health Association; 693 Sutter Street, San Francisco, Calif.; Vol. 3, January, 1967.
- What to Tell Your Children About Sex*. Child Study Association of America; Pocket Books, Inc.; New York, N.Y.; 1964.

Evaluation. Every resource unit should indicate ways of evaluating the outcomes. These suggestions may appear in the section on activities or may be presented as separate items. They should recommend a variety of evaluational measures that are in keeping with the objectives. They may include testing, analysis of written and oral expression, observation of behavior in various activities and situations, and student comments.

The Teaching-Learning Unit

Basically, the teaching-learning unit is planned by the teacher for a particular group of students. Blount and Klausmeier list four basic differences between the teaching-learning unit and the resource unit.

1. A teaching-learning unit takes into consideration the achievements, interests, and abilities of specific students.
2. A teaching-learning unit is formulated according to one's idea of the successive steps, the sequence, most effective in learning concepts, skills, and abilities.
3. A teaching-learning unit presents a limited number of concepts, skills, and attitudes; the number is determined by the time available, the specific objectives of the unit, the manner and sequence in which the concepts will best be learned, and so on.
4. A teaching-learning unit is often in a format suitable for student use.¹²

The teaching unit is what many teachers take with them to class each day. In it are guidelines for the day's teaching, materials to be used, and tentative schedules of time involved in each lesson. While he is in the classroom, the teacher is able to work with the students in planning the activities that will go into the unit. These activities are performed, with the help of the teacher, by motivated students. It should be remembered, though, that at no time does the teacher allow the students to take complete control of the planning. This responsibility can never be completely relinquished by the teacher.

When planning the unit, the teacher will first think in terms of weekly rather than daily lesson plans. The units will usually vary in length, depending on the subject matter to be covered, emphasis on different areas, films to be shown, and so on.

A Sample Unit. The following is a sample teaching-learning unit. Its format and ordering may differ slightly from the one suggested in this chapter. For example, objectives are stated as unit "aims," introductory activities are offered, and some important concepts that the students should acquire by the end of the unit are listed. Otherwise, the unit covers all the major areas in the teaching-learning unit described on p. 61. The sample unit covers a five-week period on infectious diseases. The age level is approximately that of the ninth grade.

<i>Topic:</i> Infectious Diseases	<i>Grade:</i> Ninth	<i>Unit Plan</i>
<i>Time:</i> Five weeks	<i>Unit Sequence:</i> Given before noncommunicable diseases.	

¹² Framework for a Teaching-Learning Unit from *Teaching in the Secondary School*, 3rd edition, by Blount and Klausmeier. Copyright © 1953 by Harper & Row, Incorporated. Copyright © 1978, by Herbert J. Klausmeier. Copyright © 1968 by Nathan S. Blount and Herbert J. Klausmeier. Reprinted by permission of Harper & Row Publishers.

UNIT AIMS

Understandings (Cognitive Domain)

1. To recognize that certain diseases and disabilities are caused by environmental factors.
2. To understand that infection takes place when disease organisms overcome body defenses.
3. To realize that bacteria may enter the body in many ways; through the nose, mouth, ears, eyes, breaks in the skin, and digestive tract.
4. To understand that the favorable conditions for bacteria are the presence of organic matter (food), moisture, and moderate temperatures.
5. To recognize that individuals encounter most disease microorganisms through social interaction of one kind or another.
6. To understand that rest, sleep, exercise, cleanliness, balanced diet, health habits, and immunizations are deterrents to infectious diseases.

Attitudes (Affective Domain)

1. To develop favorable attitudes toward maintaining and observing the health rules and regulations in the community for the preservation of health and the prevention of the spread of disease.
2. To develop favorable attitudes toward observing good habits of personal cleanliness in order to prevent the spread of disease.
3. To develop an interest in the need to control communicable diseases.
4. To emphasize the importance of immunization
5. To develop an appreciation of the role one plays in disease control.

Habits and Skills (Action Domain)

1. To develop the skills of locating information concerning
 - a. how to avoid disease.
 - b. immunization time.
 - c. how to recognize infection.
 - d. methods of combating infection.
2. To develop the habit of seeing a doctor regularly.
3. To develop the habit of daily cleanliness.

POSSIBLE INTRODUCTORY ACTIVITIES

1. Present the film "Anatomy of a Disease."
2. Discuss some of the problems students have in controlling and preventing disease.
3. Give a brief history of disease from early times to the present.

4. Present current news articles and clippings on communicable diseases; have students envision what might occur if no methods of combating them were known.

UNIT INTRODUCTION

Every second of every day we are being constantly bombarded by an endless variety of one-celled organisms which fill the air we breathe, cling to our skins, and invade the water we drink, the rivers in which we swim, and the clothes we wear. No sooner do we finish washing than the organisms return, some to aid us, some to do us harm. But there are steps we can take to prevent infection. These include getting a regular physical check-up; maintaining a healthy balance between rest, play, and work; and preserving good nutrition and hygiene.

Yet even with these precautions we are sometimes still unable to protect ourselves from infection. In this case the human body has a marvelously effective method of taking care of itself. Let us look at this protection.

<i>Major Subject Matter Content</i>	<i>Learning Activities</i>	<i>Student Resources</i>
How do the agents which cause communicable disease enter the body? A. Person to person. B. Food. C. Water. D. Air E. Animal and human carriers F. Through the skin	A. Discuss some possible ways to eliminate these causative factors. B. Discuss questions 1. What is bacteria? 2. How do they live? 3. Why is the common housefly more than just a nuisance? (experiment for answers) C. Dramatize what a "carrier" is in an 8-mm film or in a play.	Programmed text: <i>Prevention of Communicable Disease</i> Health Heroes Series Louis Pasteur Edward Jenner Robert Koch Edward Trudeau
Why is the sanitation of the milk supply one of the most important items of food control? A. Milk spoils easily, protection comes through 1. Healthy cows. 2. Clean dairy. 3. Pasteurization. 4. Careful transportation. 5. Sanitary bottling. C. Protection of meat. D. Protection of water.	A. Discover laws for the pasteurization of milk (on state level). B. Discover diseases whose germs thrive in milk and meat. C. Debate the question of whether it is safe to drink from a well. D. Discuss what the government does to protect the public.	Pamphlets on control of communicable diseases from local Department of Health: <i>How Your Local Health Department Serves You</i> <i>How Your State Health Department Serves You</i> <i>Milk Sanitation</i> <i>Clean Water Is Everybody's Business</i>

Major Subject Matter Content	Learning Activities	Student Resources
<p>The Body's Barriers</p> <p>A. First-line barriers</p> <ol style="list-style-type: none"> 1. Skin. 2. Cilia of nose 3. Reflex acts <ol style="list-style-type: none"> a. Sneezing b. Coughing c. Vomiting. d. Diarrhea 4. Tears 5. Saliva 6. Tonsils. <p>B. Second-line barriers</p> <p>If microbes or any other foreign particles succeed in breaking through the first-line barriers they are met by a complex internal system of defenses</p> <ol style="list-style-type: none"> 1. Histamine. 2. Leukocytes 3. Phagocytes. 4. Fever. <p>C. Third-line barriers.</p> <p>(Immunity is the body's specific resistance to infection and is due to the presence of specific antibodies. Immunity can be obtained in one of two ways: Active immunity or passive immunity.)</p>	<p>A. Film <i>Defense Against Invasion</i> (10 min)</p> <p>B. Follow-up discussion</p> <p>C. Class investigation: What are some other possible first lines of defense?</p> <p>D. Start vocabulary chart</p> <p>E. Discuss the three steps in the onset of disease—<i>invasion, incubation, and infection</i>—and how the body fights each stage</p> <p>A. Film <i>Body Defenses Against Disease</i> (10 min)</p> <p>B. Discussion of other internal systems of body defenses</p> <p>A. Invite local doctor to discuss with the class how immunity works and why it is important</p> <p>B. Film <i>Immunization</i> (11 min)</p> <p>C. Students do individual immunity chart. List diseases they had and all past and recent immunizations</p>	<p><i>Control of Communicable Disease in Man</i></p> <p><i>How Your Body Fights Infection</i></p>
<p>Some Common Communicable Diseases</p> <p>A. Common Cold</p> <ol style="list-style-type: none"> 1. Causative agents 2. Symptoms. 3. Treatment 4. Transfer methods 5. Prevention. <p>B. Streptococcal Infection</p> <ol style="list-style-type: none"> 1. Causative agents 2. Symptoms 3. Treatment 4. Transfer methods 5. Prevention. <p>C. Influenza.</p> <ol style="list-style-type: none"> 1. Causative agents. 2. Symptoms 3. Treatment 4. Transfer methods. 	<p>A. Film <i>The Common Cold</i></p> <p>B. Solve problem: what can be done to protect students in school and at home?</p> <p>A. Construct cartoon strips, "The Biography of a Streptococcus"</p> <p>A. Construct a "Fight Influenza" campaign. Have students decide what local agencies could cooperate in the effort, what publicity</p>	<p><i>Cold Facts About the Common Cold</i></p> <p><i>Common Cold</i></p> <p><i>Let Your Cold Alone</i></p> <p><i>Winter Enemies</i></p> <p><i>Influenza</i></p>

Major Subject Matter Content	Learning Activities	Student Resources
5. Prevention.	would be necessary (posters, radio and TV commercials, etc.), and how each segment of the population could be reached.	
D. Tuberculosis	A. Film: <i>Tuberculosis</i> (11 min.) and/or <i>Are You Positive, Rancher Glen's Secret</i> .	<i>Climate and TB</i> <i>Crusade of the Christmas Seal</i> <i>How Your Body Fights Tuberculosis</i> <i>Tuberculosis Through the Teens</i> <i>TB—Basic Facts in Basic English</i> <i>What You Need to Know About TB</i> <i>What You Can Do About Tuberculosis</i> <i>Long Adventure</i> <i>Teenagers and Venereal Disease</i>
1. Causative agent.		
2. Symptoms.		
3. Treatment.		
4. Transfer methods.		
5. Prevention.		
Veneral Disease	A. Discuss venereal diseases, how they spread, how they are treated.	
A. Syphilis	B. Study effect of venereal diseases on history of mankind.	
1. Causative agents.	C. Learn work of Public Health Service in fighting venereal disease.	
2. Symptoms.	A. Film: <i>A Quarter Million Teenagers</i> (16 min.).	<i>Strictly for Teenagers</i> <i>Syphilis and Gonorrhea</i> <i>Some Questions and Answers About VD</i>
3. Treatment.		
4. How it is transferred.		
5. Prevention.		
B. Gonorrhea		
1. Causative agents.		
2. Symptoms.		
3. Treatment.		
4. How it is transferred.		
5. Prevention.		
Prevention of the Spread of Communicable Disease (Steps that can be taken to prevent serious complications of some of the more common communicable diseases of young people.)	A. Consult newspapers and current magazines for accounts of recent advances against disease. B. List personal habits which affect prevention of these diseases. C. Discover measures followed in the school which protect the pupils from the spread of communicable disease. D. Films: <i>Preventing the Spread of Diseases</i> (14 min.); <i>Your Health: Disease and Its Control</i> (11 min.).	<i>Protect Your Family Through Immunization</i> <i>Common Sense</i> <i>The Science Book of Wonder Drugs</i>
Maintaining good health.		
B. Having periodic health examinations.		
C. Recognizing early signs of communicable diseases.		
D. Receiving vaccinations at appropriate times.)		

IMPORTANT CONCEPTS

1. Everyone has the potential for disease at all times.
2. A disease may become established long before it may be recognized.
3. Communicable diseases are still a major health problem of the individual.
4. There are certain steps the individual can take to prevent and control communicable diseases
5. A great majority of disease is controlled by the body's natural defenses.
6. Disease-retarding factors within the body may be bolstered by immunization.
7. A disease may be prevented or its effects can be lessened through sound health practices.

SOME POSSIBLE MEANS OF EVALUATION

1. Discuss with the class the aims of the unit; see which ones were best met, which least.
2. Observe the growth in attitudes, skills, and knowledge of the students.
3. Present a knowledge test before and after the unit.
4. Ask for student comments about the knowledge gained.
5. Prepare with the class a list of unanswered questions.
6. Have the class prepare a health campaign for their school. Structure it much as the learning activity for influenza but have it much broader in scope and limit the "audience" to the school's physical area.

TEACHER RESOURCES

Books

- Adams, John M. *The Virus Diseases* New York The Macmillan Company, 1960
- Anderson, Gaylord W., and Margaret G. Arnstein. *Communicable Disease Control*. New York The Macmillan Company, 1962
- Curtis, Helena. *The Viruses* New York American Museum Science Books, 1966.
- Fiennes, Richard. *Man, Nature and Disease* New York Signet Science Library Books, 1965
- Health Concepts Guides for Health Instruction* Washington, D C American Association for Health, Physical Education, and Recreation, 1967.
- Krugman, Saul, and Robert Ward. *Infectious Diseases of Children*. St. Louis. The C V. Mosby Company, 1964.
- Morton, R. S. *Veneral Diseases* New York Pelican Books, 1966
- School Health Education Study. *Health Education A Conceptual Approach to Curriculum Design*. Minneapolis. 3M Education Press, 1968

Pamphlets

- Cause, Spread and Cure of Syphilis.* Washington, D.C.: U.S. Government Printing Office.
- Common Cold.* New York: Equitable Life Assurance Society, Bureau of Public Health.
- Gonorrhea, Its Cause, Spread and Cure.* Washington, D.C.: U.S. Government Printing Office.
- Guarding Your Family's Health.* Boston: John Hancock Mutual Life Insurance Co., Health Education Services.
- Home Care of Communicable Diseases.* Boston: John Hancock Mutual Life Insurance Co., Health Education Services.
- The News About Tuberculosis.* Boston: John Hancock Mutual Life Insurance Co., Health Education Services.
- Protection Against Communicable Diseases.* New York: Equitable Life Assurance Society, Bureau of Public Health.
- Seminar Reference Material on Disease Prevention Through Immunization.* Washington, D.C.: U.S. Dept. of Health, Education, and Welfare, Public Health Service, Communicable Disease Center.
- Syphilis, the Invader.* New York: Public Affairs Committee, Inc.
- TB—The Killer Cornered.* New York: National Tuberculosis Association.
- Tuberculosis.* Washington, D.C.: World Health Organization.
- Why Let It Burn?* New York: American Social Hygiene Association.
- Winter Enemies.* Boston: John Hancock Mutual Life Insurance Co., Health Education Services.

Films

- Anatomy of a Disease.* National Tuberculosis Association; 1740 Broadway; New York, N.Y. 10019.
- Are You Positive.* National Tuberculosis Association; 1740 Broadway; New York, N.Y. 10019.
- Body Defenses Against Disease.* Encyclopaedia Britannica Films, Inc.; 425 N. Michigan Avenue; Wilmette, Ill.
- Common Cold.* Encyclopaedia Britannica Films, Inc.; 425 N. Michigan Avenue; Wilmette, Ill.
- Defense Against Invasion.* Department of State; Albany, N.Y.
- Immunization.* Encyclopaedia Britannica Films, Inc.; 425 N. Michigan Avenue; Wilmette, Ill.
- A Quarter Million Teenagers.* Churchill Films; 662 North Robertson Blvd.; Los Angeles, Calif.
- The Innocent Party.* Calvin Productions; 1105 Truman Road; Kansas City, Mo.
- The Invader.* Distributed by Center for Mass Communication, Columbia University Press; 1125 Amsterdam Ave.; New York, N.Y.
- Rancher Glen's Secret.* National Tuberculosis Association; 1740 Broadway; New York, N.Y. 10019.
- Tuberculosis.* Encyclopaedia Britannica Films, Inc.; 425 N. Michigan Avenue; Wilmette, Ill.
- Your Health—Disease and Its Control.* Coronet Instructional Films; 65 E. Southwater St.; Chicago, Ill., 60601.

STUDENT RESOURCES

Books

- American Medical Association. *Today's Health Guide*. Chicago: American Medical Association, 1965.
- Bauer, William W., et al. *The New Health and Safety*. Glenview, Ill.: Scott, Foresman & Company, 1966.
- Igel, Haller B. *American Health and Safety Series: Prevention of Communicable Disease*. Palo Alto, Calif.: Programmed Learning Text, Behavioral Research Laboratories, 1965.
- Townsend, R., K. Townsend, and L. Doss. *Building a Healthy Body and Healthful Living*. Austin, Tex.: Steck Health Series, Steck Company, 1960.
- Williams, Dorothea M. *Building Health*. Philadelphia: J. B. Lippincott Co., 1959.
- Wright, Betty L., and Reuben D. Behlmer. *Living in Safety and Health*. Philadelphia: J. B. Lippincott Co., 1966.

Pamphlets

- Clinate and TB*. The National Tuberculosis Association, 1740 Broadway, New York, N.Y. 10019.
- Cold Facts About the Common Cold*. Aetna Life Insurance Co., Farmington Ave.; Hartford, Conn.
- Common Cold*. Equitable Life Assurance Society, Bureau of Public Health, 393 Seventh Ave., New York, N.Y.
- Control of Communicable Disease in Man*. American Social Hygiene Association; 1740 Broadway, New York, N.Y. 10019.
- Crusade of the Christmas Seal*. National Tuberculosis Association, 1740 Broadway, New York, N.Y. 10019.
- Health Heroes Series*. Metropolitan Life Insurance Co., 1 Madison Ave., New York, N.Y.
- How Your Body Fights Infection*. American Medical Association, 535 N. Dearborn St.; Chicago, Ill.
- Influenza*. U.S. Department of Health, Education, and Welfare, 330 Independence Ave., S.W.; Washington, D.C.
- Let Your Cold Alone*. American Medical Association, 535 N. Dearborn St., Chicago, Ill.
- Long Adventure*. National Tuberculosis Association; 1740 Broadway, New York, N.Y. 10019.
- Man Against Disease*. Metropolitan Life Insurance Co., 1 Madison Ave.; New York, N.Y.
- Protect Your Family Through Immunization*. U.S. Public Health Service; 330 Independence Ave., N.W.; Washington, D.C.
- Strictly for Teenagers*. (Ask your State Board of Health.)
- Syphilis and Gonorrhea*. (Ask your State Board of Health.)
- TB—Basic Facts in Basic English*. National Tuberculosis Association, 1740 Broadway, New York, N.Y. 10019.
- Teenagers and Venereal Disease*. American Social Hygiene Association; 1740 Broadway, New York, N.Y. 10019.

- Tuberculosis Through the Teens.* National Tuberculosis Association; 1740 Broadway; New York, N.Y. 10019.
- What We Need to Know About TB.* National Tuberculosis Association; 1740 Broadway; New York, N.Y. 10019.
- What You Can Do About Tuberculosis.* John Hancock Mutual Life Insurance Co., Health Education Services; 200 Berkeley St.; Boston, Mass.
- Winter Enemies.* John Hancock Mutual Life Insurance Co., Health Education Services; 200 Berkeley St.; Boston, Mass.

The Daily Lesson Plan

A daily lesson plan is nothing more than an expanded portion of a unit plan. It is planned on a day-to-day basis and telescopes some aspect or aspects of the unit to give further magnification.¹³ Although the lesson plan is an expansion of certain portions of the unit, it in no way alters or changes the order in which the unit is to be taught.

Lesson plans are especially helpful to new teachers because they offer them a detailed daily schedule to follow. These plans also involve a greater amount of planning in terms of specific teacher goals and methods. Unlike the unit plan, which gives a guide to what will be taught over a particular period of time, the lesson plan is much more detailed and gives actual topics to be covered on a particular day and specific activities to be used in motivation and learning.

There are also considered disadvantages to the daily lesson plan. One is that it is time consuming; it removes the teacher from giving his time to other important aspects of the teacher-learning situation. Another is that a detailed lesson plan tends to hold the teacher to a rigid course of instruction, whereas the unit plan allows for more flexibility. These problems can be overcome if the teacher recognizes that there is a need for a healthy balance between unit planning and daily lesson planning. Where certain situations warrant more detailed preparation, the teacher should not hesitate to do so.

Preparation of the Daily Lesson Plan. Basically, there is no one way of planning the daily lesson. There are a number of reasons for this. One is that in creative teaching, the teacher must be allowed the flexibility to plan in a way which best meets the needs of his or her teaching situation. A second factor is that the subject matter will often dictate the type of lesson plan needed. A third factor concerns the students involved. Consideration must be given to grade level, student backgrounds, learning abilities, achievement groupings, and previous learning activities. Callahan agrees that no two lessons must have identical organization, but he does feel that the teacher should give attention to seven important factors while preparing a daily lesson plan. These he gives as follows:

¹³A brief history and general nature of the daily lesson plan can be found in William H. Burton, *The Guidance of Learning Activities*, 3rd ed (New York: Appleton-Century-Crofts, 1962), pp 322-24

1. Specific objectives.
2. Specific procedures.
3. Use of time.
4. Materials and resources.
5. Assignments.
6. Evaluation.
7. Relationship of a particular daily lesson plan to its parent unit ¹⁴

Callahan suggests further that the beginning teacher should experiment with different types of lesson plans to determine just how these seven points can best be covered.

To illustrate one way in which a daily lesson plan may be developed, an outline of a junior high school lesson plan on venereal disease will be used. Let us suppose that the motivating factor in devising this plan got its impetus from a newspaper article which stated that the incidence of teen-age venereal disease was rising throughout the country. As the unit involved was communicable disease, the students began asking questions about the article. The teacher, therefore, felt it important to expand the unit in order to give more emphasis to venereal disease.

Before the teacher began working on a lesson plan, she asked the students to list questions they had concerning venereal disease. He then developed the following outline.

Lesson Plan

Topic: Venereal Disease *Grade:* Ninth

Time: Approximately three days, fifty minutes a period, three periods a week.

SPECIFIC OBJECTIVES

Knowledge

- A. To develop an understanding that venereal disease is a highly communicable disease which harbors itself exclusively in man.
- B. To develop certain concepts basic to understanding venereal disease, namely:
 1. Man is the source of infection.
 2. Syphilis and gonorrhea can only be contracted through intimate contact (sexual intercourse).
 3. Syphilis has four important stages.
 4. Venereal disease can be cured only by competent medical care.
 5. There is no immunity to venereal disease.

¹⁴Sterling G. Callahan, *Successful Teaching in Secondary Schools* (Chicago: Scott, Foresman, 1966), p. 172

6. Venereal disease can be contracted the first time intimacy occurs.
 7. Venereal disease can be passed on to others.
 8. Venereal disease has no social boundaries.
- C. To develop an understanding of the extent of man's dependence on competent medical care.

Attitudes

- A. That students realize venereal disease is a threat to good health.
- B. That students understand that venereal disease must be cured in its early stages in order to prevent further complications.
- C. That young people be made to feel they cannot allow "shame" to prevent them from seeking competent help.
- D. That there is an obligation on the part of a contaminated person to see that those with whom he has sexual contacts get competent medical help.
- E. That students develop an appreciation of the role they can play in the reduction of venereal disease.

Habits

- A. To develop the skills of locating information with particular emphasis upon:
 1. Causes of syphilis and gonorrhea.
 2. The effects of the diseases on man.
 3. Signs and symptoms of gonorrhea and syphilis.
 4. How venereal disease can be cured.
- B. To develop judgmental skills with particular emphasis on:
 1. The ability to evaluate signs and symptoms of venereal disease.
 2. The ability to recognize that certain steps must be taken to prevent the spread of venereal disease.
- C. To exercise the habit of taking every possible precaution in avoiding venereal disease.

First Day of Lesson Plan

<i>What to Teach</i>	<i>Time</i>	<i>Procedures</i>	<i>Resources</i>
	10 min	Briefly review some of the basic facts of communicable disease which were covered in class earlier in the unit.	
	5 min	Discuss some of the causes for the rise in teenage venereal disease	Pamphlets <i>Why the Rise in Teenage Gonorrhea?</i>

What to Teach	Time	Procedures	Resources
			<i>Why the Rise in Teenage Syphilis?</i>
<p>I. Syphilis</p> <p>A. Caused by spirochete</p> <p>B. Transmitted by</p> <ol style="list-style-type: none"> 1. Intimate contact 2. Congenital syphilis <p>C. Not transmitted through door knobs, toilet seats, or objects exposed to air and sunlight</p> <p>D. Signs and symptoms</p> <ol style="list-style-type: none"> 1. Primary stage 2. Secondary stage 3. Latent stage 4. Tertiary stage <p>E. Results of failure to treat syphilis</p> <p>F. Diagnosis</p> <p>G. Treatment</p>	20 min	<p>Main discussion on syphilis</p>	
	10 min	<p>Discuss student questions</p> <p>Cover written questions students handed in earlier that hadn't been answered in the lecture</p> <ol style="list-style-type: none"> 1. Why are blood tests for syphilis required in certain states before marriage? 2. Where did syphilis originally come from? 3. How can a baby be protected when a pregnant mother has syphilis? 4. Can keeping clean keep you from getting syphilis? 5. How can a person get syphilis without having sexual intercourse? 	
	5 min	<p>Hand out booklet for students to do assigned work in</p> <p>Give assignments for next period</p> <p>Answer last-minute questions</p>	<i>Student Manual on Venereal Disease</i>

Assignments:

1. Have students do Part I in their *Student Manual on Venereal Disease* for the next class.
2. Hand out pamphlet *Today's VD Control Problem* for students to read and prepare questions from for first part of next class.

Second Day of Lesson Plan

<i>What to Teach</i>	<i>Time</i>	<i>Procedures</i>	<i>Resources</i>
	10 min.	Go over answers to Part I in manual, using teacher's handbook. Discuss pamphlet.	<i>Teacher's Handbook on Venereal Disease Education</i>
II. Gonorrhea A. Caused by gonococcus. Transmission 1. Intimate contact. 2. Baby's eyes infected during birth. C. Symptoms 1. Male 2. Female. D. Results of failure to seek treatment. 1. Sterility. 2. Blindness. 3. Crippling. E. Diagnosis F. Treatment.	15 min.	Main discussion on gonorrhea.	
	5 min.	Discuss student questions handed in earlier. 1. How is gonorrhea diagnosed? 2. Why is gonorrhea harder to detect in females? 3. Can gonorrhea simply "go away?"	
	16 min.	Show film	<i>A Quarter Million Teenagers</i> (film)
	4 min.	Give assignments for next class	

Third Day of Lesson Plan

What to Teach	Time	Procedures	Resources
	10 min	Go over answers to Unit II in <i>Student Manual</i>	
		Cover questions about film, pamphlet	
III Individual and Community Responsibility	10 min	Discussion on Individual and Community Responsibility	
A Education			
1 Role of the home			
2 Role of the school			
3 Role of the health department			
4 Role of family doctor			
	25 min	Film	<i>Dance Little Children</i> (film)
	5 min	Discuss film in relation to the last three days	
		Answer questions from students	
		Hand out leaflets	<i>Syphilis and Gonorrhea</i> <i>Strictly for Teenagers</i> <i>Some Questions and Answers About VD</i>

TEACHER RESOURCES

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and it serves as an important guideline to new teachers who need to keep unit goals in view.

It is a matter of speculation whether the unit plan will always be the preferred way of organizing varied areas of knowledge. With teaching innovations made daily, there is every possibility that a new method, less demanding of a teacher's time, might be put to good use.

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The Nature of Creative Teaching

Emerson once said, "Imagination is not a talent of some men but is the health of every man." This imagination, or creativity, is a natural quality inherent in all human beings, but few can express this essential virtue fully. Emerson's assertion can be easily applied to education, but educators must be aware of their own creative abilities before they can hope to maintain the health of the imaginative minds entrusted to them.

This is not nearly as simple as it would at first appear. Although there is considerable agreement that the educational environment should place a high value upon creative behavior both for the teacher and for the students, little is known about the principles whereby such an environment can be created in the classroom. Moreover, research has yet to show whether the environment can influence the individuals in this type of classroom to seek new, original understandings or discovery methods.

Our interest in this text, therefore, will be to search for, formulate, and develop principles for (1) creating an environment which places a high value on creativity, (2) presenting teaching techniques in specific areas of health education, and (3) guiding the evaluative behavior of the teacher. It will be up to each reader to ascertain how effective these principles will be for him.

THE HEALTH TEACHER NEEDS TO BE CREATIVE

One may well ask whether the subject of health affords a great outlet for creative activity. The fact is evident that there is quite possibly no field of

human knowledge that affords a greater outlet for creative teaching than health. The primary responsibilities of health education are to encourage the student to explore his own habits, attitudes, and behavior; to discover for himself the need for good health; and to pursue a course of action, based on current knowledge, for experiencing the "good life." These goals deal with values and behavior on such a personal level that they must be presented in a vital, imaginative way in an atmosphere that will encourage uninhibited discussion and introspection. Only then can health make an impact on the student's quality of life.

Few students today are willing to accept being told the cold facts of health. The depersonalized statistics of death, cancer, and heart disease or the "hard sell" of washing before meals and brushing one's teeth after eating destroy the very personal nature of the subject. Unlike some other areas of education which tend to be more abstract and remote from living, health is an essential and individual subject which readily lends itself to student involvement if presented without the limitations of cold facts. The teacher must bridge the gap that may exist between the student and the subject. One way to do this is to emphasize "pupil discovery" rather than "telling." If the student is allowed to discover for himself the solutions to the barriers to a healthy life, then he will feel the pride and satisfaction that come with the discoveries. This fact has been emphasized by John Gardner.

All too often we are giving our young people cut flowers when we should be teaching them to grow their own plants. We are stuffing their heads with the products of earlier innovation rather than teaching them to innovate. We think of the mind as a storehouse to be filled when we should be thinking of it as an instrument to be used.¹

THE CHARACTERISTICS OF CREATIVITY

The Romans coined the phrase *Ignotum per ignotius*, which means "explanation of a difficult matter with a still more difficult explanation." It fits very well in trying to define and explain creativity, for merely giving many examples of creativity can well lead to confusion. It is known that creativity can seldom be consciously controlled, but it is found in almost all human activities. The discoveries made by creative people vary in kind, according to the limitations of the activity in which the person is involved and according to the individual's innate talent. A poet has a far broader range of alternatives for innovation than does an electrician who must keep his wiring techniques within standard safety limits.

Smith articulated a common definition quite simply. "Creativity is sinking

¹John Gardner *Self-renewal* (New York: Harper, 1965), p. 21

CREATIVE TEACHING IN HEALTH

When the health teacher begins to apply these principles to the classroom, he may start by presenting a body of relevant facts or ideas. From these facts and ideas the students are led to make correct inferences about unstated facts and concepts. This challenges the student to find out for himself the generalization or inferences that the subject matter contains. They are the product of his own thinking and his manipulation of basic knowledge. Thus, the student becomes personally involved in his own learning, with enough detachment, however, to allow for critical evaluation of the results. One of the important results of this discovery is that the student is not simply a storehouse for a set of conclusions stated by the teacher.

SETTING CONDITIONS FOR CREATIVE TEACHING

Teachers have often decried establishing a creative atmosphere in their classrooms because they equate creativity with a license for permissiveness. They believe they must involve the students to the extent that the students can decide what is relevant and necessary for their own education. No one can refute the fact that students lack knowledge and experience. It would be unreasonable to let a sixth-grade math class decide its own curriculum. However, math can be learned more thoroughly by students under the guidance of a creative teacher than it can be in a classroom which discourages innovation and few direct-involvement activities. It should be noted that creativeness occurs when a motivated student discovers something completely new to him.

To enable this freedom of thought, many factors must be removed that currently are believed to stifle spontaneity. Unfortunately, the climate in some classrooms serves to place obstacles in the path of creative teaching and learning.

Gardner Murphy provides an excellent illustration of an uncreative environment in a school where

children are found who sit in rows with an adult in front, who are required to learn things which they do not wish to know, and who are forced for the most part to look forward in the room, not at one another or out the windows. They are required to recite—that is, to give back what they have read or been told. When the overwhelming excitement of something that has happened outside of school comes up, and the impulse is to talk about it, they are told that they can take care of that when school is over. . . . Their interest in things which are not laid out in the curriculum at the particular time and place is pushed aside as inappropriate and irrelevant. It is the task of the adult to know what the children are to learn. What they are learning all the time outside of school is regarded as an annoyance, a distraction, or even a sign of

rebellion against the standard good behavior required of the school.³

This description may sound a little extreme, but this type of educational philosophy persists today. Accompanying it is a cloth to snuff out any flicker of creativity which may surface from time to time in the classroom. Let us, then, consider those influences which will provide a more effective background for creativeness.

A CLIMATE FOR CREATIVE TEACHING—LEARNING

If the health teacher is to be concerned with creative teaching, he will discover that it takes more than a conglomeration of facts, ideas, and activities to produce it. Even the most creative ideas can die in an environment which lacks stimulation. Think, for example, of the teacher who wanted her students to break up into small groups for a critical debate but did not carry through with the assignment because she feared that it would "disrupt her classroom." Some teachers become unsettled by any situation which may disturb the status quo. They are threatened by excessive noise, lack of agreement, argumentative questions, and other situations which may have overtones of "disorder."

Smith has listed five conditions which tend to develop creativity.⁴ (1) intellectual conditions, (2) physical conditions, (3) social-emotional conditions, (4) psychological conditions, and (5) educational conditions. By conditions of creativity the author means the techniques or environmental stimuli that cause original behavior, uncommon responses, and a continual flow of ideas.

Intellectual Conditions

A vital need in health education and in all teaching is to influence the student to draw warrantable conclusions, relate concepts, discover central ideas, and utilize as wide a range of resources as possible for developing insights. Some of the conditions which can lead the student to this desired end include his constant use of new evidence, his stress upon ideas, not facts; the development of creative thinking; his utilization of personal experiences; and his linking of key ideas. Because these conditions are closely linked to a free academic atmosphere, let us examine them more closely.

The Constant Use of New Evidence. By the time a new textbook rolls off the press today it is, at best, probably two years old. This fact is critical in a field such as health education, where medicine and research move at such a rapid rate that it is almost impossible to keep up, much less allow for a possible time lag of two years. Consequently, health teachers should take advantage of current periodical literature, new supplementary booklets,

³Gardner Murphy, *Human Potentialities*, 2nd ed (New York: Basic Books, 1961), pp. 101-102

⁴Smith, *op. cit.*, p. 120

popular magazines, newspapers, and other media such as television to keep abreast of current information. Used to full advantage, this new information can provide an endless stream of meaningful classroom activity. For one, the teacher can frequently present the pupil with new evidence that apparently conflicts with previous information. The pupil then can integrate this information with previous knowledge and propose theories to account for the discrepancies in the two sources. For example, the differences in the numbers of people who are killed in auto accidents from one year to the next or die of cancer or heart disease may warrant an investigation into why these trends exist. Has the inclusion of safety devices on automobiles had an effect on highway accidents? If not, why have they not? Has the anti-smoking campaign had any effect on the deaths from smoking-related diseases?

The Stressing of Ideas, Not Facts. There is a tendency in health education to bombard students with facts instead of encouraging them to see the significance of the completed puzzle. Food calories, names of muscles and bones, and leading causes of death can become much more relevant if students are motivated to look for their implications. For every principle that a student learns he should see at least one implication. By doing this he is able to use each principle as a spring-board to further inquiry. Facts (such as enamel being the hardest, most durable material in the body) are meaningless by themselves. The teacher who concerns himself with learning facts is simply concerning himself with a lower-level mental process. The teacher who uses data and stimulates the student to translate, interpret, or apply it is dealing in higher-level processes. In the lower mental process there is an emphasis upon the student receiving material, memorizing it, and reproducing it without a flaw. In the higher mental process there is an assimilation of facts, a synthesis of the material into something not there before, and a presentation of it in such a way as to make it a new idea.

The Development of Creative Thinking. Possibly everyone has seen the situation where the teacher says, "What do you think the answer to this question might be?" Generally such a teacher is not really interested in what his class thinks the answer might be, but whether they can guess what *he* thinks the answer is. The winner of the game to guess what answer the teacher wants usually receives the highly praised, "That's right, Johnny." This is about all the child does receive, because he lost any opportunity for creative thinking.

The reverse of this situation would be one in which a teacher leads his students to the point that not one but many answers are plausible. This, of course, often unsettles some teachers, for the result is not always predictable. But the multianswer technique does have its bright side, which affects the other, for it offers the students a chance to develop the skill of seeking alternative solutions. Trying to second-guess a teacher can be frustrating for a child who needs to find the worth of his own ideas.

The Utilization of Personal Experiences The more the student can incorporate what he has learned into his own personal experiences, the more meaningful the learning process becomes. To give each learning situation a chance to become part of the student's world, teachers must have a thorough knowledge of each and every individual in his class so that he can include some "local color" in the teaching-learning situation. (See Chapter 2 for a discussion of this point.) Because of this, students are often able to grasp the relationship between sound health practices and personal modes of life. With the threat of nuclear war and interracial strife, students will not be content with long monologues on what the instructor alone thinks is important. Not only must teachers see to it that students are exposed to the varied concepts of good health, but they must also be certain that these concepts are presented in such a way as to be both relevant and honest.

The Linking of Key Ideas. Students should not be made to think of health in terms of isolated parts, but as many interlinking factors having a direct or indirect bearing on one's state of well-being. If, for example, a student is learning about good dental care, he should view good dental health not only as brushing one's teeth, but also as an aspect of personal appearance (psychological health), nutrition (Vitamin A), consumer awareness (obtaining a dentist, purchasing toothpaste), and infection and disease (possibility of mouth infection spreading to other parts of the body).

Creativity is more than a topic that is incorporated in a few lessons daily. It must be developed much like any other attitude, and it cannot grow in an atmosphere not prepared to nurture it. The intellectual conditions described here cannot alone provide the climate for creativity, but they are—along with the physical, social-emotional, psychological, and educational conditions—necessary to the process.

Intellectual Conditions

<i>Aids to Creative Teaching</i>	<i>Obstacles to Creative Teaching</i>
1. The teacher constantly stays tuned in to new ideas	1. The teacher limits his discussion to the textbook
2. The teacher leads the students to discover ideas and concepts instead of teaching them just facts	2. Students are expected to memorize facts for future tests
3. The teacher contrives situations where creative thinking is necessary for the student	3. The teacher does the interpreting for the student
4. The teacher utilizes the personal experiences of the students as much as possible.	4. Students' observations and personal experiences are unexamined
5. The teacher attempts to show the interrelatedness of subject matter areas	5. The teacher deals in isolated facts

Physical Conditions

In many traditional secondary schools today classrooms, lunchrooms, and hallways are almost barren of any type of decoration except for an occasional peeling of plaster or a no-smoking sign. Why is there such physical drabness? Probably the best answer is that "it has always been that way." One almost has the impression that the best type of education is that which takes place in surroundings which lack any aesthetic appeal.

But things are changing, however slowly. More and more schools are stressing the importance of beautiful surroundings, both for exteriors and for interiors of buildings. Classrooms are now equipped with both blackboards and bulletin boards, colorful and movable desks, centers inside and outside the classroom for different types of learning, floors which are completely covered with carpeting so that children can sit down on it if desired, large windows, and fluorescent lighting. In some schools one can even hear the playing of soft music in the hallways. All of this, of course, could be considered the ideal, and any teacher would be happy to be blessed with one of these pleasant additions to his classroom.

But even the teacher who finds himself in an almost bleak situation where none of the above is available can provide students with a creative and stimulating atmosphere. The area of health is especially rich in possibilities for enriching the environment with such materials as the following:

Booklets	Magnetic boards
Books	Mobiles
Brochures	Motion pictures
Bulletin boards	Newsletters
Cartoons	Newspaper clippings
Chalkboards	Opaque projector
Charts	Overhead projector
Closed-circuit television	Permanent mounted screen
Comic strip drawings	Phonographs
Drawings	Posters
Encyclopedias	Programmed instruction
Exhibits	Puppets
Filmstrips	Radio—AM-FM
Flannel boards	Scrapbooks
Flash cards	Slides
Flat pictures	Specimens
Folders	Tables
Graphs	Tape recorders
Leaflets	Teaching machines
Magazine clippings	Transparencies

Certain materials, such as pencils, paper, chart paper, maps, bulletin

boards, and posters, should be available or on display at all times. Other materials should be available as the situation demands. Chapter 6 will discuss the creative use of many of these materials and will list sources for gathering information relevant to these materials.

Obviously, the preceding conditions plus the physical organization of students in the class will contribute greatly to the creative environment. Students who are afforded little or no freedom in the class feel excluded from any physical involvement in what is going on. The opposite of this is an environment in which students participate actively in setting up bulletin boards, exhibits, classroom activities, and some lesson plans. Seating arrangements should be determined less by tradition and convenience and more by the particular lesson that is being presented that day. Remember also that changes in surroundings are a welcomed improvement and can often stimulate students, especially when they are able to participate in the change.

Physical Conditions

<i>Aids to Creative Teaching</i>	<i>Obstacles to Creative Teaching</i>
1. Students are encouraged to move desks when situations demand	1. Students are prevented from moving desks, because of teacher and/or physical surroundings
2. Students have access to a variety of materials in the classroom	2. There are few materials available in the classroom
3. Students are allowed to move about at predetermined times	3. Students have little or no freedom of movement
4. Students have opportunities to collect and display health materials	4. The teacher presents all materials to the class

Social-Emotional Conditions

Andrews, in *Creative Education The Liberation of Man*, states that if a teacher desires to establish an emotional-social climate conducive to creativity he must

allocate time for experimentation, for exploration, for the incubation of thoughts and feelings, and for discovery. He must encourage the individual to find the true, the good, and the beautiful within himself; to solve his problems with more than the literal-rational mind; to relate his own feelings and his own beliefs but not to disregard conventions, rather to hold them in reservation; to tolerate strangeness but also to question bias and prejudiced opinions.⁷

⁷Michael F. Andrews, *Creative Education The Liberation of Man* (Syracuse, N.Y.: Syracuse University Press, 1965), p. 33.

Reading through a number of books one will find that a nonconforming environment, free use of imagination, humor and lightheartedness, acceptance, and sensitivity to needs are factors which help to produce healthy social-emotional conditions for creativity in the classroom.⁸ On the other hand, such conditions as emphasis on grading, pressure to conform, teacher-centered authority, and sanctions against questioning inhibit creativity.

An interesting aspect of the social-emotional situation is that a child showing a high development of creativity is often pressured to reduce his productivity. The sensitive teacher can help such a situation by praising originality while designating tasks which stress free use of imagination. By giving creatively inhibited students a chance to produce with no threat of disappointment, an instructor can help the spontaneous individual become more acceptable to the group.

Social-Emotional Conditions

Aids to Creative Teaching

1. The classroom atmosphere is one of mutual respect and acceptance.
2. Students have opportunities to discuss and ask questions of the teacher.
3. The teacher accepts the students' attempts to think creatively.

Obstacles to Creative Teaching

1. The classroom is autocratic.
2. Free discussion and/or "irrelevant" questions are not allowed.
3. The teacher rejects the students' efforts to think creatively.

Psychological Conditions

Smith lists four factors which appear essential for the development of a psychologically creative environment⁹:

1. A physically and mentally hygienic classroom.
2. An atmosphere which allows student freedom.
3. The proper motivation and tensions to agitate creative thinking and creative production.

⁸See A. Cropley, *Creativity* (London: Longmans, Green, 1987). Calvin Taylor (ed.), *Creativity: Progress and Potential* (New York: McGraw-Hill, 1964), p. 98. E. Torrance, "Developing Creative Thinking Through School Experiences" in S. J. Parnes and H. F. Harding (eds.), *A Sourcebook for Creative Thinking* (New York: Scribner, 1962).

⁹Smith, *op. cit.*, p. 131.

4. A faculty and administration which understands and supports creativity.

A Physically and Mentally Hygienic Classroom Much of what was stated under social-emotional conditions applies here also. In addition, a creative environment should alleviate the students' fear of participating orally in class, set realistic expectations, provide productive work and a variety of stimuli, induce a sense of trust in the teacher, and establish a cooperative rather than a competitive climate.

Creating an Open Classroom To open the door to creative teaching-learning, the teacher must allow the students to question, explore, work independently, test, evaluate, apply, and express their ideas. This does not mean that there are no controls to behavior in the classroom. It does mean that limits are both clearly visible and flexible enough to adapt to the activity. As activities vary, so limits must vary with them.

Sometimes in creative teaching a teacher may find that certain situations may not lend themselves to a completely open environment. In this case he may find it just as rewarding to arrange special "creative teaching-learning periods," such as on Monday, Wednesday, and Friday from 1:00 to 2:30 P.M.

Motivating for Creativity One of the most vital components of creativity is motivation.¹⁰ In motivating for creativity, the teacher sees his role as being less that of a provider of fixed and inflexible facts and more that of a resource person that students can tap from time to time.

In an extremely negative environment where only "correct" solutions are acceptable, facts are important and uniformity of behavior is expected. In such a situation motivation for creative endeavor is absent.

Positive motivation for creativity results when the teacher encourages students to look outside of an environment where discipline regulates behavior and outcomes are rigidly predicted.

A Faculty and Administration Which Understands and Supports Creativity Extracurricular or cocurricular activities, team teaching, varied class size, provisions for individual study, and resource centers all nurture creativity. But without the support and encouragement of other teachers and the administration, a teacher finds it difficult, if not impossible, to carry out some of his ideas by himself.

Through faculty and administration support each teacher will become exposed to the creative work of others, provide for an environment which nurtures creativity, and encourage experimentation and innovation.

It is astonishing how the teaching becomes alive when both faculty and administration are linked in the common purpose of creativity. This common condition can infect students and reticent teachers alike.

¹⁰See Taylor, op. cit., p. 24

Psychological Conditions

Aids to Creative Teaching

1. The classroom atmosphere is one which promotes student discussion and a sense of trust, respect, and acceptance.
2. The teacher allows students to voice opinions and participate in activities.
3. The teacher encourages students to be creative.
4. Teachers and administration are sensitive to the creative needs of students.

Obstacles to Creative Teaching

1. The teacher demands attention and quiet and rejects student ideas.
2. The teacher rejects student efforts to participate in planning or student-directed activities.
3. Little attention is paid to the creative activity of students.
4. No effort is made in the school to understand creativity.

Educational Conditions

The educational conditions are really the *modus operandi* of creative teaching. These methods of creative teaching will be discussed at length in subsequent chapters.

One of the key terms relating to educational conditions is *student readiness*. This refers to the ability of the student to grasp concepts, use materials, interpret, and so on. The teacher who has a knowledge of students' needs, interests, and development is equipped to recognize individual student readiness and to organize the teaching-learning situation in a more creative manner. For instance, there is no reason why children in elementary school should not be allowed the opportunity to discuss the beneficial and/or harmful effects of some drugs. However, their unreadiness to consider the physical, psychological, and social implications of narcotic drugs seems obvious. With children of this age it would be better if the teacher could begin with a discussion of some of the harmful drugs that can be found in the home, such as ammonia, paint spray, certain glues, gasoline, aspirin, and others. In this way the pupils would gain meaningful concepts and at the same time be able to form a personal association with the drugs discussed. The building of some background in drugs has begun. By the time the students are older and ready to discover the physical-social-psychological bases for heroin use, they will have a good concept of what a drug is and what powerful drugs can do.

TEACHING CONTROVERSIAL ISSUES

If health education is to be truly based on the needs of the student and society, then it is clear that the curriculum must embrace some of the so-called controversial issues which face us today. Fraser offers an excellent definition of what a controversial issue is:

A controversial issue involves a problem about which different individuals and groups urge conflicting courses of action. It is an issue for which society has not found a solution that can be universally or almost universally accepted. It is an issue of sufficient significance that each of the proposed ways of dealing with it is objectionable to some sector of the citizenry and arouses protest. The protest may result from a feeling that a cherished belief, an economic interest, or a basic principle is threatened. It may come because the welfare of organizations or groups seems at stake. When a course of action is formulated that virtually all sectors of society accept, the issue is no longer controversial.¹¹

Under this definition three subject areas in health education stand out as controversial: sex education, venereal disease education, and drug education. Many parents (and teachers) feel that any type of education in these areas will lead young people down the path to immorality by teaching them the techniques of love making, drinking, and drug abuse.

There are, of course, a number of reasons why one or more of the subjects are not being taught. Two factors are a lack of qualified teachers and pressure applied to administrators by parents.

Once the schools are able to get over the first hurdle of whether or not to include sex education, venereal disease education, and/or drug education in the curriculum, three other far more important questions arise: Who should do the teaching? When should these areas be taught? How should they be taught?

Who Should Do the Teaching? Any instructor who plans to teach sex, venereal disease, and drug education for the first time needs two important background elements. The first is thorough knowledge of subject matter and the second is sensitivity. The first is much easier to gain than the second. To gain knowledge one must read, think, and discuss the facts concerning these three areas as much as possible. It is sad but true that many misconceptions are started by the teacher. To become well versed in these areas requires a complete knowledge of the physical, social, emotional, medical, and legal implications of the topics. To think of sex education as merely reproductive biology is to misrepresent totally the concept of what constitutes human sexuality. Other concerns in sex education include such areas as social relationships, physical and mental health, language, mass media, contraception, and so on.

Gaining sensitivity is difficult. First, let us explain what we mean by sensitivity. Sensitivity involves an ability to feel intuitively what is happen-

¹¹Dorothy M. Fraser, *Deciding What to Teach* (Washington, D.C.: Project on the Instructional Program of the Public Schools, National Education Association, 1963), p. 153.

ing at any given time, to sense when an individual is unhappy, confused, or elated; to realize the importance and meaning of introspection. In the areas of sex and venereal disease education, sensitivity means being at ease with one's own sexuality as well as that of others, especially young people. If, for example, a teacher who has not come to grips with his own sexuality attempts to teach in the area of sex education, he may find his efforts completely wasted, regardless of his intentions. Students are quick to identify and ignore those who are negative in their approach, guarded in their answers, or limited in their range and depth of discussion.

One can gain sensitivity in a number of ways. In sex and venereal disease education talking with students, parents, other teachers, doctors, psychiatrists, and others will help to expose the teacher to varying views. Course work in psychology, sociology, and family living and summer workshops in the areas of sensitivity and group interaction are also valuable sources of exposure. Most important of all are, of course, informal meetings with young people.

In drug education the teacher will want to talk with students, parents, doctors, psychiatrists, police, and others who have possibly had a personal connection with drug users. Workshops, teacher-parent meetings, and meetings with local drug authorities are also valuable. A worthwhile experience for any teacher who may be involved in drug education is being able to talk with past as well as present users of drugs in order to get views from the "other side."

When Should These Areas Be Taught? Sex education, venereal disease education, and drug education should logically start in the home. A child's first interest in sex may come as early as two or three. Parents should be equipped to handle questions arising from this interest.¹² Ideally, the school should continue what the parents have covered. They should begin a program of sex education in kindergarten and continue it all the way through high school and college.

Drug education is not different. Young children are quite aware of the smoking, drinking, and pill-taking habits of their parents. Questions are sure to arise. Drug education should, therefore, begin in the home and also continue through high school and college. At the elementary grade levels discussion can begin with some of the common drugs and chemicals that can be found around the home, such as aspirin, cough medicine, glue, paint thinner, and so on. The list is endless.

It is vitally important that programs of education in these areas be made available for students K-12 and through college. The programs must

¹²See Marion O. Lemgo and Helen Southard, *Parents' Responsibility* (Chicago: American Medical Association, 1967), and *Parents Guide to Facts of Life for Children* (New York: Child Study Association of America, 1965).

be continuous and uninterrupted. They must be made a normal part of the health curriculum and not be "special subjects." Finally, they must be taught by competent teachers

How Should They Be Taught? This question can be applied to two areas (1) what one should consider in planning a program in the so-called controversial areas, and (2) what to consider when teaching.

WHAT TO CONSIDER IN PLANNING A PROGRAM

1. Secure strong support from such groups as the PTA, local medical association, mental health association, churches, and so on.
2. Try to secure the support of the parents in advance of the program. If possible, have a planned program of education for the parents on what will be taught prior to starting the actual school program.
3. Involve the pupils as much as possible in the planning and preparation of the program. When feasible, ask older students what they would like to have learned about the subject matter when they were in the grade for which the program is being planned.
4. Allow time for those teachers who are going to instruct to gain "sensitivity" training in the areas being considered
5. Be sure that enough lessons are planned in the program to cover the subject adequately and that time is provided for students to ask or discuss questions and to allow for evaluation and feedback.
6. Plan to present a variety of sources—guest speakers, films, pamphlets, and so on.
7. Plan into the program the opportunity for student-parent-teacher meetings. One or two of these at the end of the program may help parents, teachers, and students to see views and opinions from another vantage point.
8. Make sure that guest speakers are open to discussion and opposing viewpoints. Young people are quick to identify and ignore those who are totally negative in their approaches.

WHAT TO CONSIDER WHEN TEACHING

1. Make your approach positive rather than negative. Do not try to prove that drugs are "no good" or that premarital intercourse is "bad." Rather, aim at helping young people to make responsible decisions based on adequate knowledge.
2. Do not just present facts. Aim toward forming positive attitudes and behaviors as well.
3. Establish a good climate for discussing values. At all times cultivate a genuine respect for the ideas and questions of students in order that the fullest degree of communication may take place.

4. Be open to any and all relevant questions. In this way students will get answers they are seeking, and the teacher will gain insights into what concerns students.
5. Provide time at the end of your program for follow-up. In this way you will be able to evaluate the success and/or failures of your program.
6. Be constantly open to new ideas.

SUMMARY

Teaching students to take a personal and immediate interest in their health requires more than a thorough knowledge of subject matter and course objectives. It must encompass the ability to motivate pupils into individual involvements with the subject. This ability is not presently seen in a majority of classrooms, but the potential for this ability is inherent in almost every person.

The health instructor should meet the challenges presented in creative teaching by thinking beyond the realm of pure science to that of questioning the social-moral-emotional implications of his field. To do this the teacher must have a solid foundation of knowledge in the physical, social, and psychological aspects of health as well as an ability to be free of convention while expecting something new and exciting. The creative teacher must have confidence in his own abilities as well as believe in the natural talents of his students. Finally, the creative teacher must recognize the need for creativity in all men. "The creative mind in its day-to-day functioning must be a critical mind. The ideal would be not merely to be aware, but to be aware of our awareness."¹³

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¹³Aaron Copland, *Music and Imagination* (New York: Mentor Books, 1952), p. 55.

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6

The Creative Use of Instructional Media

Webster's New Collegiate Dictionary gives the following as one definition of *medium*: "That through or by which anything is accomplished." It is easy to imagine literally hundreds of examples of media in this sense. For a geologist it is his rocks, for an artist his paints, for a jockey his horse, for a surgeon his scalpel. Obviously, for a teacher it could be a myriad of objects, techniques, and ideas.

Instructional or educational media include all the aids that appeal to the learner through his senses: sight, sound, touch, taste, and smell. They are those devices through or by which one can accomplish learning. Those available today generally appeal to only two of these senses and can be classified into *audio* and *visual* categories, with an overlapping area containing both. A general diagram would look something like that on the following page.

To discover every advantage which could be gained through the proper use of the various educational media, one must first be prepared to dispense with it. In other words, everything audio and visual outside of the teacher and his pupils must be disposed of. Included in this impressive experiment (and excluded from the classroom) must be posters; pictures; phonographs; books of every kind; magazines; overhead, opaque, and movie projectors; a television set; all games, "educational" and otherwise; abacus, number-

<i>Audio</i>	<i>Audiovisual</i>	<i>Visual</i>
Tapes	Sound motion pictures	Classroom television camera
Records	Television	Slides
Radio	Dramatic plays	Charts
Listening labs	Sound filmstrips	Posters
Telelectures		Cartoons
Instruments		Filmstrips
		Teaching machines
		Graphs
		Telewriting
		Books
		Newspapers
		Magazines
		Transparencies
		Maps
		Globes

line, and alphabet cards; a tape recorder; building and Montessori-type blocks and materials; and so on. Looking at a completely bare classroom, devoid of any "sensual" stimulation, one can easily prove one advantage of educational media—they are necessary to give a continual stimulation to the senses.

It is a clever teacher who can remain in a classroom with twenty-eight or more restless minds and bodies and give them sufficient stimulation to keep them curious and productive for hours. Even using such techniques as group discussions, problem-solving sessions, and calisthenics will not suffice; a teacher must employ aids of some kind. Children and young adults, as well as all other people, need exposure to a variety of objects, information, pictures, noises, and so on, to keep their minds in gear and receptive to new learning situations. A student will consider only one point of stimulation, the teacher, dull.

A second factor is that various media expose a student to experiences they could not possibly have or know in their usual routines. One graphic example can be noticed in children of all ages and socioeconomic levels. This is the influence of television. Children have become consumers, critics, cowboys, private eyes, villains, and superheroes. Of course, books, films, and other media serve a similar purpose. The teacher should use these media to enrich every subject by exposing her class or group to more than one view of a given topic. A unit on drug use, for example, can be made more effective by showing a film on the effects drugs have upon the body; collecting and reviewing newspaper and magazine articles on users, pushers, and legal cases; listening to tape-recorded sessions of a pot party; and so on. Such devices help a student to make up his own mind whether or not to use drugs. Through their use he can be quite certain what a drug will do to him, even though he has never tried one personally.

The media do an important job of bringing back the past. Various resources in both categories of media can trace the history of disease, bringing in the pathological, sociological, and historical influences diseases have had upon man. One cannot avoid being interested in what might have happened if President Harrison had not died of pneumonia two weeks after his inauguration, if the first successful heart transplant had been performed thirty years ago, or if syphilis in the United States had been eradicated.

What could be better to arouse curiosity than showing a class the middle episode in a film on premarital pregnancy? Or a teacher might present slides of "miracle remedy" equipment and let the class decide what it is seeing and for what purposes this equipment is used. (An overhead projector, pictures, posters, and so on, could be equally effective for this.)

Another important advantage is that these media help to encourage thinking. Thinking is complex even at the lowest level but can be organized into several classifications. These include memorization, translation, interpretation, application, analysis, synthesis, and evaluation.¹ Being able to select a medium or method that will evoke a specific kind of thinking and to help the student train his mind in the process should become a natural talent to a conscientious instructor. Knowing the statistics on how many traffic accidents occurred at a given local corner can be the first step in a student-sponsored safety campaign. Discovering the sources of the original information and deciding how to use that information are the students' mental tasks. The critical thinking that could be applied in such a situation is the epitome of the thought processes, as it encompasses all of them beyond the memory category.

Finally, the media enable students to be independently creative. Just as a careful, thoughtful teacher accomplishes his educational goals through various audiovisual aids, so, too, a student can develop new insights while engaged in a learning situation. "... the individual is a dynamic and open system. The teacher enters as a clinician improving the environment so that the system can gather together its energies and release its powers of self direction."²

A student need not be involved in a project that requires some physical action in order to release his creativity. Analyzing the information he has gained from books, pamphlets, films, and graphs, he can mentally seek fresh alternatives. He can predict future health hazards arising from today's negligence and construct alternatives. The student can evaluate his judgments periodically as new information is presented to him through the media; he can extend his mental horizons and discover new, fruitful areas for his thoughts and projects.

¹Benjamin S. Bloom (ed.), *Taxonomy of Educational Objectives* (New York: Longman, Green, 1956)

²Calvin W. Taylor and Frank E. William (ed.), *Instructional Media and Creativity* (New York: Wiley, 1966)

Misuse of Media

It cannot be said that there are disadvantages to any given medium. It is a fact, however, that many teachers overuse some types of media and that hardly any teacher gets maximum efficiency from the devices available to him. There are common cases like that of Mrs. Q. She was delighted when she found her new classroom's walls were the type into which she could press pins. She began the year with her walls covered with pictures, art work, graphs, health posters, and three-dimensional figures. As weeks went by, however, she could not keep up with her other work, and the bulletin-board areas remained the same. Still more weeks passed and the walls were unchanged. When she finally took time to put up one new bulletin-board display, one child commented to an enthusiastic friend, "Why are you looking at that now? You'll have half a year to see it." If Mrs. Q. had saved some of her original wall projects and put up just one at a time at frequent intervals, she could have been assured of a curious and receptive audience. If she had periodically selected a few children to construct a bulletin-board display on a relevant topic, she could have saved herself time and involved the class too.

Mrs. R.'s problem had to do with her inattentive class. Because she was unable to control her class and teach a health lesson at the end of every day when it was scheduled, she relied upon films to keep her rambunctious class quiet those last few minutes. After three weeks of films on everything from brushing teeth to tuberculosis, she received an especially good movie on glue sniffing. It fit perfectly into a short unit she had wanted to begin on drugs, but unfortunately the class was no longer receptive to the film medium.

Mrs. R. could have used her projector every day for three weeks, each day in a different way, if she had not attached a "functional fixation" to it. She and her class had settled upon the projector as a machine-which-showed-movies-from-the-audiovisual-department. Unaware that she could use it in a wide variety of ways, the teacher soon exhausted the health film library and her students' interest in films. It can suffice to say that all instructional devices can be similarly misused.

A final example can show the bazaar of using media with little regard for the outcome. Mr. M. did his method planning quite thoroughly. He designated uses for every conceivable type of gadget at his disposal. His high school health class was busy with students engaged in taping sessions, poster making, film production, and other projects that kept the students fully interested and occupied. At the same time, Mr. M. was utilizing equipment by breaking all boundaries of their "functional fixations." However, his projects became progressively more numerous and extensive, until they lacked both quality and depth. Nutrition was given as much involved attention as drug abuse. The projects were accomplished and displayed without serious consideration of what the students had gained

through doing them. Conclusions and generalizations gleaned from the outcomes of the activities were often ignored in the enthusiasm of beginning another project. Mr. M. could have used more thought and fewer projects involving audiovisual media. Stressing a few important units by in-depth coverage can often bring about more learning than can spectacular teaching techniques.

INSTRUCTIONAL MEDIA IN PERSPECTIVE

There is little doubt that the various instructive media are gaining more and more favor with educational systems throughout our country. There are several reasons why this "hardware revolution" is here to stay. One reason is that the American culture equates mechanization with progress. If a school has projectors, phonographs, learning machines, listening centers, and so on, it is an indication of modernization. New schools are built to include numerous bookshelves, bulletin and chalk board areas, and individualized learning centers of various types and degrees of elaborateness.

It is also true that several big businesses have considerable investments in educational-machine production, and their influence upon administrators and other educational personnel is considerable. The adoption of more and more mechanical and electronic devices for school use is plainly increasing.

What will be the influence of these media upon the students now enrolled in school and upon those who will be exposed to such media in the future? Two factors will determine this influence. Obviously, the first factor is the use the teacher will make of the media. In order to make media-directed learning experiences meaningful to a class, he will need to know the kind of audience that will be receiving stimuli from the devices. Planning an elaborate bulletin board on venereal disease for a fourth-grade class in a middle-class suburb is a wasted effort. Topics and their method of presentation must be related to the background and interest of the class if they are to be effective.

Second, in addition to knowing the backgrounds of the students, the teacher should know some of the psychological basis of creativity. Each student learns in a highly individual manner, but types of reactions to learning situations have been recognized. The outcome of a given learning situation depends a great deal upon attitude toward error. If a teacher believes that any question, if properly phrased, must require a yes or no answer or that any given statement can be evaluated as true or false, he is considered right-wrong oriented. He is the type that believes $3 + 2 = 5$, not $3 + 2 = 4 + 1$ or $3 + 2 = 10/2$. The numeral 5 is right. The number 5 represented by $4 + 1$ is not as acceptable. He will be actually training his students to reject areas where error occurs and leading them to seek accepted interpretations of the area under study. In other words, students will be cautious about making mistakes. This error rejection training is commonly done by such devices as teaching machines, programmed

EXPANDED USES OF SPECIFIC MEDIA

It would be presumptuous to call the following "examples of *creative* uses of media." Many of these described have been merely adapted to an area in health education, but with an emphasis on presenting a newer, expanded use of a medium. Creativity is a product of an individual's response to a specific situation, and in teaching, so many variables exist that methods cannot be exactly duplicated. However, there can be adaption; and what better circumstances avail themselves for creativity?

Medium: The film *Age Group:* Tenth through twelfth grade.
Project: The making of an 8-mm film on "The Acid Experiment" (or preferably, a suitable title decided upon by the students).

As the start of any project must consider the outcome, the first task of the class must be to decide the purposes of making the film. These will determine the structure of the plot and the development of the script. Perhaps the students will attempt to show that drugs are bad, no matter what the circumstances. Maybe the class will want to ensure that the conclusion matches a real-life situation and that ultimate decisions are necessarily left to the individual. Whatever is decided would not take an unreasonable length of time, as the production itself should be as efficiently planned as possible.

To shorten the plot development, a plot triangle can be constructed by the whole class. This usually consists of three statements which provide the setting and characters, tell the incident which provides the turning point, and show the conclusion. See example of this on the following page. After the skeleton plot has been constructed, a script can be written to fill in the rest of the triangle.

In the meanwhile, the class can preview available films on drugs, decide what materials will be needed, and begin to film trial segments to become accustomed to the 8-mm camera. Committees must be designated to make sure that what goes on in the film is factual and authentic.

This might sound like an arduous process, but after a teacher has endured the pitfalls of a first trial, subsequent "productions" can run smoothly, with time left to innovate. It must be kept in mind that the objectives planned for the film activity must not be overlooked during the process.

Medium: Television. *Age group:* All levels. *Project:* Use of the television camera.

It has been noticed that the effectiveness of television instruction decreases as the grade level increases. That is, this medium is more

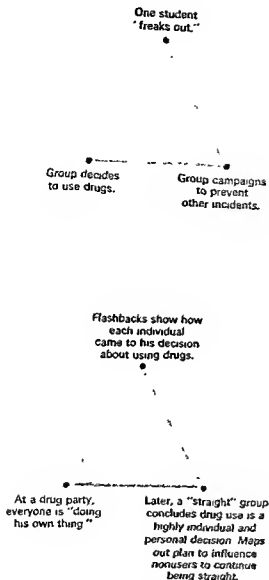


Figure 6-1 Plot triangle.

successful in grades 3 through 9 than it is in high school or college.⁷ If one has a hook-up to an educational station, many benefits can be had through the carefully prepared lessons of the television instructors. Unfortunately, because health per se is seldom carried on these networks, the classroom teacher must discover for himself what programs in science (or history) could be relevant to an area in health. Of course

⁷Wilbur Schramm, "What We Know About Learning from Instructional Television," *Educational Television: The Next Ten Years* (Stanford, Calif: Institute for Communication Research, 1962)

this could lead to disjointed lessons unless the programs could be videotaped and replayed during a coordinated learning experience.

It is possible that some schools, particularly high schools and colleges, might have in-classroom television cameras, which can be helpful in showing details during an instructor's lecture. The camera is mounted above a table on which an object is displayed. As the instructor talks he can draw attention to the object, whose image is transferred in a magnified state upon the screen of the room's television set.

The day is not far away when high school health teachers will be instructing students in classes of human sexuality and sex education. A high school teacher could discuss the psychological and social reasons for contraception (and against contraception) and display the various contraceptive devices. Precious instruction time can be saved by letting the class see the devices without letting them be passed around. Various pills for a drug unit, isolated parts of whole pictures, microscope slides, and medicinal labels are all among the many other "props" whose magnified forms can be effectively used in a learning situation.

Medium: Tape recorder. *Age Group:* Intermediate—High school.
Project Role-playing vignettes from taped interviews.

Students of all ages, not excluding adults, love to act out roles. Many of us know people for whom role playing is a way of life. Junior high and high school constitutes a time in most adolescents' lives when role playing is very close to reality. To aid the students in distinguishing and defining their personal feelings about health issues, role playing is a useful technique. The instructor can assign a role to an individual, and that individual can interject his personal interpretations and thoughts into the part.

The type of lesson we will describe will require the students to prepare, for they will need to know some facts about smoking and alcohol usage. If the teacher plans the tape sessions as a culminating activity, the sessions need not be "anticipated" with the students. Often the pupil responses are more revealing if they are spontaneous.

The teacher, along with a small committee of students, can select the topic and subjects for the tapes. The subjects can be students in or outside the class or adults in the community. They will be playing roles also, but not being present in person can add an authentic touch to the staging.

Tape 1: An older person speaks to his two sons. "Now, boys, I've seen you both sneaking cigarettes here and there, but you've reached the age where you can make a public decision about

smoking. I've smoked for twenty-five years, and you can see it has had no ill effects on me."

Roles: One son who wants to continue to smoke and his brother who has tried it and wants to convince his brother to quit.

Tape 2. A "judge" reads the case against an eighteen-year-old veteran of Viet Nam who was arrested for buying beer in a liquor store.

Roles: One defense lawyer; one prosecuting lawyer (or a jury who must decide the consequence).

Tape 3: The background sounds of a party are heard. There are loud laughs and the buzz of conversation.

Roles: Several teenagers in another part of the house. The opening dialogue will begin something like this:

ONE: How disgusting to hear our parents carrying on that way!

ANOTHER: Not disgusting at all! They're just having some fun. That's all.

A THIRD: What's wrong with having fun with V-8 juice or ginger-ale?

A FOURTH: Hold it now. What are you, your parents' keeper? Just because they let down a few times, you are practically condemning them as alcoholics!

The group continues, debating the issue of social drinking. Smoking could also be included.

The general procedure would be to play the tape and then let the students begin their roles. As other members of the class feel involved, they can pull their chairs closer and join in, taking the side they feel is most akin to their own feelings. Ideally, all three tapes could be going at once in various parts of a large area, so that only a small group would be involved in each situation. The groups could rotate; roles could be changed; and discussion could be started again after a given period of time.

Medium: Bulletin board. *Age group* Elementary *Project*
Stimulate interest in proper nutrition.

Children often need to discover not only what foods are essential to good health, but also what some of the available foods are and how they taste. For an elementary unit on nutrition, one bulletin board can be used the entire time. This bulletin board can be constructed by having each student make a door and attach it on the board. On each door could be his personal knob, with his name on the outside of it. The board could be titled, for example, "Open the Door to Proper Nutrition" or "Find the Key to Good Health." Behind each door there might be a picture of the type of food being studied, like fruits, vege-

tables, or diary products. Below the door could be placed two columns of small pictures of foods. The columns could be labeled, for example, "Do Like" and "Don't Like."

The children can aid in securing pictures and samples of the various foods. For instance, vegetables are an important source of essential vitamins and minerals. The students can decide what vegetables they have had that they like or do not like and can put the pictures or words for the pictures in the appropriate column. Then, with the help of the teacher, they can discuss vegetables like cauliflower, kale, and eggplant, which perhaps many students have not tasted. The simple preparation of these foods in the classroom with a pan and hot plate can provide an interesting opportunity to learn food preparation, serving, and table manners.

Fruits such as the avocado, fresh pineapple, and coconut can be handled in much the same way. Enterprising teachers of older pupils can have them bring in easy recipes which include a vegetable or fruit that might help the students move it from the "don't" to the "do" column.

The board can be a challenge for the students to discover various sources for the pictures or to make pictures of the vegetables in various stages of growth or preparation. It can also show substitute sources of the ingredients of vegetables that the children cannot move from the "don't" to the "do" column.

These sample lessons are only four of the hundreds of uses of media. Using a combination of media would produce hundreds more. Of course each lesson involving media is individual, simply because of the physical limitations of facilities or of the amount of control a teacher has.

WHERE TO GET INFORMATION CONCERNING EDUCATIONAL MEDIA

Teachers and curriculum planners should review sources of information, selected references, periodicals, and journals concerned with educational media. The following list of sources of information on educational media is designed to aid the teacher and other school personnel in the selection and classroom use of the best modern instructional techniques and materials.

Where to Look for Audiovisual Materials

The following is a listing of some of the more useful references the health educator may use in locating audiovisual materials.

Films

Educational Film Guide Edited by Josephine S. Antonini. H. W. Wilson Co.: 950 University Avenue; New York, N.Y. Annual supplements, 1959, 1960, 1961,

and 1962 Indexes and describes alphabetically by title and by subject 22,949, 16-mm motion pictures in all instructional subjects.

Educators Guide to Free Films. Compiled and edited by Mary Foley Horkheimer and John W. Diffor. Educators Progress Service; Randolph, Wis. Revised annually. Provides title, content description, length, running time, whether silent or sound, date of release, information on distributors, and limitations on distribution for 4,339 currently available free films.

The Educational Media Index. McGraw-Hill Book Company; 330 West 42nd Street; New York, N.Y. Describes all nonbook instructional materials.

Educational Television Motion Pictures, 1960 Catalog Descriptive Catalog Containing Series Data, Subject, and Use Level Index for 16-MM Educational Television Programs. NET Film Service; Audio-Visual Center, Indiana University; Bloomington, Ind. Lists and describes 1,403 educational television programs available to schools, organizations, and individuals for nontelevision and nontheatrical use. Gives title, content description, length, film characteristics, grade classifications, and rental and purchase information.

Library of Congress Catalog. Motion Pictures and Filmstrips. Washington, D.C. Quarterly with annual and quinquennial cumulations. Includes listings by title and a subject index of all the educational motion pictures and filmstrips released in the United States and Canada. Short annotations of each title are provided.

U.S. Government Films for Public Educational Use—1960, by Seerley Reid, Katharine W. Glugston, and Annie Rose Daugherty. Office of Education, U.S. Department of Health, Education, and Welfare, Washington, D.C. Available from the Superintendent of Documents, U.S. Government Printing Office; Washington, D.C. Price \$2.75. Describes and indexes alphabetically by title and by subject motion pictures and filmstrips of U.S. government agencies and departments available for public use.

Filmstrips

Educators Guide to Free Filmstrips. Compiled and edited by Mary Foley Horkheimer and John W. Diffor. Educators Progress Service, Randolph, Wis. Revised annually. Lists and describes 270 silent filmstrips, 305 sound filmstrips, and 51 sets of slides available for use free of charge.

Filmstrip Guide. Edited by Josephine S. Antonini. H. W. Wilson Co., 950 University Avenue, New York, N.Y. Four-year cumulated supplement, 1955-58. Annual supplements, 1960-62. Provides an alphabetical listing by title and a subject index for 13,141 sound and silent filmstrips in all instructional subjects.

Records, Tapes, and Transcriptions

Audio Cardalog. Edited by Max U. Bilderssee. Box 1771, Albany, N.Y. 1958 to date. Monthly except July and August. Provides more than 400 cross-indexed cards each year and gives complete data on selected records and tapes.

Children's Record Reviews. Box 192; Woodmere, N.Y. October, 1957, to date. Issued five times per year. Includes listings of children's records featuring stories, fairy tales, and so on.

Educators Guide to Free Tapes, Scripts, and Transcriptions. Compiled and edited by Walter A. Wittich and Gertie Hanson Halsted. Educators Progress Service;

Randolph, Wis. Revised annually. Lists and classifies 138 free tapes, 287 free scripts, and 83 free transcriptions available to educators.

Sources of Information About Equipment

The Audio-Visual Equipment Directory, 8th ed. edited by James W. Hulfish, Jr., 1962, 331 pp. National Audio-Visual Association, Fairfax; Va. Price \$5.

Audio-Visual Equipment Manual, by James D. Finn, 1958, 363 pp. Holt, Rinehart and Winston, Inc.; 383 Madison Ave.; New York, N.Y. Price \$15.

Printed Media: Books

Printed media are said to function well in directing attention, in presenting a model of the student's performance, in guiding thinking, and in giving feedback.⁴

Because books can and do change behavior they should be selected wisely. The problem is that about half the states have some regulations regarding the selection of basal textbooks, with a few states having a single-textbook-adoption policy. The new teacher should investigate both the system's regulation concerning adoption policy and the availability of textbooks. Equally important, the new teachers should look into the resources which are available for securing additional supplementary references. For, although his particular situation may prevent him from selecting the basal text to be used, no system prohibits enriching the program through the use of additional texts of his own.

The following list of textbooks contains only those published from 1960 to the present.

Elementary and Junior High School Texts

Bauer, W. W., et al. *Curriculum Foundation Series*. Chicago: Scott, Foresman and Company, 1962.

- | | |
|------------------------------|--------------------------------|
| Grade 1: <i>Being Six</i> | 5: <i>About Yourself</i> |
| 2: <i>Seven or So</i> | 6: <i>About All of Us</i> |
| 3: <i>From Eight to Nine</i> | 7: <i>Growing and Changing</i> |
| 4: <i>Going on Ten</i> | 8: <i>Advancing in Health</i> |

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| Grade 1: <i>First Steps to Health</i> | 6: <i>Growing in Health</i> |
| 2: <i>Learning About Health</i> | 7: <i>Improving Your Health</i> |
| 3: <i>Habits for Health</i> | 8: <i>Today's Health</i> |
| 4: <i>Building for Health</i> | 9-10: <i>Health Today and Tomorrow</i> |
| 5: <i>Your Health</i> | |

⁴Robert M. Gagné, *The Conditions of Learning* (New York: Holt, 1965), p. 284.

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| Grade 1: <i>Health and Happy Days</i> | 5. <i>Keeping Healthy and Strong</i> |
| 2: <i>Health in Work and Play</i> | 6. <i>Teamwork for Health</i> |
| 3: <i>Health and Safety for You</i> | 7. <i>Exploring the Ways of Health</i> |
| 4: <i>Growing Your Way</i> | 8. <i>On Your Health</i> |

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| Grade 1: <i>All About You</i> | 5. <i>Understanding Your Needs</i> |
| 2: <i>You and Others</i> | 6. <i>Choosing Your Goals</i> |
| 3: <i>Growing Every Day</i> | 7. <i>Foundations of Fitness</i> |
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K-2: *Science Around Us*

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| Grade 1: <i>Science for Work and Play</i> | 5: <i>Science in Our World</i> |
| 2: <i>Science for Here and Now</i> | 6: <i>Science for Today and Tomorrow</i> |
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| 3: <i>Health and Fun</i> | 7: <i>Men, Science and Health</i> |
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SUMMARY

Imagination and resourcefulness add valuable dimensions to teaching, and various instructional media are tools through which these two can find numerous opportunities to develop. Media can help provide constant sources of stimulation, give experiences not usually encountered in everyday living, and show opposing points of view. In addition, they can help reconstruct the past, develop academic curiosity, encourage various ways of thinking, and enable students to become independently creative.

Media methods can be overused or substituted for necessary teacher exposure and defeat their own purposes. They can be used to "train" children in much the same way as machines are programmed, paradoxically achieving results that are the opposite of a creative ideal.

One can see that merely stockpiling audio and visual media equipment does not ensure creative processes. Using any medium means careful consideration of not only objectives but also possible outcomes. Above all, these uses must stress the flexibility inherent in the medium, as educating for creativity necessarily involves helping both student and teacher to become aware of alternatives.

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Methods and Techniques

Once the basic curricular decisions have been made, the priority concepts identified, and the related content selected, methods and techniques must be chosen that will present this content in the most advantageous way. There is a tendency, at this point, to neglect the thoughtful planning that is necessary for the selection of appropriate techniques. It is quite common for teachers to settle into a comfortable pattern of "read and regurgitate," which they apply uniformly, regardless of the nature of the content. Conversely, others habitually apply various types of student-centered techniques to all forms of content in ways that are often inappropriate. This latter style often appears creative at first glance, but usually results in little progress being made toward educational goals.

The real essence of creative teaching is found in the utilization of the most favorable combination of teaching materials, illustrative examples, and mode of presentation for a given teaching situation. Creative teaching often involves innovative techniques; however, creativity, as used in this text, does not necessarily call for the constant development of new techniques. A teacher might develop a new way to organize the main ideas found in a specific health topic and present them by use of some traditional method such as a lecture discussion. A good article that illustrates an important health concept might be discovered in an improbable source, such as a popular magazine, and presented in the form of a conventional reading assignment. The creative aspect is often found in the unique way that conventional elements are combined and applied to a given situation.

AN OVERVIEW OF BASIC TEACHING TECHNIQUES

The proper selection of specific teaching techniques involves consideration of several complex factors such as the maturity level of the students, the nature of the content, the time, the materials and equipment available, and the personality and background of the teacher. In the chapters that follow these factors will be discussed as they apply to specific content areas, and in several instances detailed examples will be provided. However, before these specific situations can be properly considered, an overview of some of the teaching techniques that are particularly useful to the creative teacher is necessary.

Discussion Techniques

General Discussion. Most teachers oriented toward creativity attach considerable value to the factor of "student involvement," which is often obtained through use of such techniques as field trips, problem-solving activities, and laboratory-type experiences. Unfortunately, these techniques often require a good deal of advanced planning, special materials, and class time for their proper use. A good open-ended class discussion with broad class participation can generate a good deal of "instant involvement" without the use of elaborate procedures. When properly conducted it can provide students with the opportunity to review facts and synthesize them into meaningful generalizations that have practical applications to health problems.

Two preliminary conditions greatly affect the degree to which the benefits of class discussion may be realized. These are (1) the existence of a favorable classroom environment that permits the students appropriate freedom of expression and (2) the possession of sufficient information by the student to discuss the topic involved in a meaningful way. The first condition results more from the teacher's general spirit or attitude than from specific procedures. It is illustrated by teachers who give proper credit to students for good answers, who often reinterpret contributions that are slightly incorrect or irrelevant, and who handle grossly incorrect responses in a manner that minimizes the student's embarrassment. In short, a good discussion environment is produced by the teacher who avoids the use of ridicule and generally regards any sincerely offered student response as a useful contribution to the discussion. The second condition, concerning adequate knowledge, is important if one is to avoid the rambling and unproductive "pooling of ignorance" type of discussion. Although there are certain situations that call for a brief airing of student opinions and misconceptions, major discussions for the purpose of building concepts can only take place if the students possess the necessary raw materials in the form of pertinent facts. For this reason discussions are usually more successful after the students have done some reading, viewed some films, heard some resource speakers, or participated in other such activities.

Once the discussion gets under way, then specific leadership techniques become important. There are probably an infinite number of tips or guidelines for discussion leaders. *The following are a few of the more useful ones:*

1. Turn questions back to the group if there is a reasonable chance of eliciting a good reply; students learn far more when they answer a question than when they listen to a reply.
2. Distribute group participation, thus involving as many of the class as possible. *When more than one hand is raised, the student who has not yet spoken generally should receive preference.*
3. Do not reply to a student's answer with a harder question that might be impossible for him. If you wish to ask a follow-up question, direct it to the rest of the class. For example, "That's correct, now can someone else tell us. . . ."
4. Give students whose contributions have been challenged or ridiculed a chance to reply if they wish. A teacher may often overlook this simple courtesy as he seeks to distribute participation.
5. Be alert to "dead-end" situations in discussions, where sufficient facts are not available to resolve differing opinions. Recognize the disagreement and move on to more promising aspects of the topic.
6. Provide occasional facts where they are needed to keep things moving. The discussion leader should generally avoid drawing conclusions or making generalizations for the class, but often a simple fact or two will help students in discussing the larger aspects of a particular topic or issue.

Any teacher who establishes a good classroom learning climate and challenges students with a meaningful discussion question will soon discover many more good discussion tips.

Symposium. The symposium is a technique wherein a small number of students first present brief oral reports on a given topic then serve as "resource persons" in a general class discussion which follows the individual reports. The members of the symposium panel—by means of library work, field trips, interviews, or other similar activities—bring information to the class that is otherwise not available. When properly conducted this technique can be extremely rewarding as a learning activity that makes only moderate demands on the teacher in terms of advanced preparation and organization of participants. The opportunity that the symposium provides for the questioning of student "experts" often produces lively discussions, for there is less tendency for class members to accept passively something they do not believe from one of their peers as compared with a presumably knowledgeable adult. The specific procedures for this tech-

nique vary according to such factors as topic, grade level, availability of resources, and individual styles of teaching. However, those presented in the following paragraphs generally apply.

1. Because the key to a good symposium lies in the quality of the initial reports, it is generally best to select as speakers only those students who have the ability and willingness to do a good job. This procedure is of particular importance at the secondary level, where the development of health knowledge and values, rather than speech skills, is the health teacher's primary responsibility. There are many alternate activities that are much more appropriate for those students with poor speaking ability. At the elementary level, however, where there is much more emphasis on the integration of subject matter, it may sometimes be necessary to compromise the quality of the health lesson to provide all types of pupils the opportunity to gain speaking experience.

2. Unless unusually good student leadership is available, the symposium committee will usually need teacher help in dividing its report topic into logical subtopics. This procedure will tend to minimize overlapping or neglected coverage and will produce a report with a more logical format. When it is practical to do so, this task can be best accomplished with a short meeting with the committee during a study hall, during a home room period, after school, or at some other time when the committee and the teacher are free. If no mutually free time is available, then basic organizational help can be provided in class at the time the assignment is made.

3. In addition to basic guidance from the teacher, the student participants also need some time to meet on their own to organize their presentation further. In some situations students will have the opportunity and the willingness to meet during their out-of-school hours; however, it is often necessary for the teacher to provide some help with this task. Some school libraries provide conference rooms for student groups; some modern school plants provide small conference rooms adjoining regular classrooms. Even without these conveniences it is often possible to help students set up meetings during the health period in a near-by vacant room or other appropriate area in the school building.

4. Another way the teacher can raise the quality of the reports is by guiding the participants toward good sources of information. This might be a recent issue of *Today's Health*, a pertinent article in a news magazine or newspaper, television special, or a special book in the library. Most of these recommendations will be useful to all sections of health education, and many of these will have value with subsequent groups of students. With only moderate effort, the teacher can provide each student reporter with one or two good suggestions that can form the nucleus of the report. The specific amount and nature of this help should vary considerably with the background and ability of the students. Some slow students will need very specific help, whereas strong students are often best left to their own

devices. The average student can usually be counted on to bring in a good report if he has received one or two good tips and encouragement to search on his own.

5. Thus far the descriptions of this technique have centered on the importance of the student's search for information; the teacher's next task is the encouragement of the effective delivery of this information. The mechanics of the actual presentation of the symposium should vary with the specific situation; however, the following points generally apply:

- a. The individual presentations should be short; three to five minutes is generally appropriate.
- b. Each report should focus on one or two interesting and relevant points rather than attempt a systematic coverage of detailed material.
- c. Strongly encourage students to report in their own words in conversational tones; notes are needed for reference but reports should not be read.
- d. Encourage the use of illustrations, charts, models, and other props that aid interest or clarity to the presentation.
- e. Allow a student leader to chair the general discussion if a reasonably capable one is available, otherwise assume leadership of the discussion but refer questions to the panelists. Be a leader, not a lecturer.

Buzz Session. Large group discussions often provide opportunities for only a few students to participate with any degree of effectiveness. The buzz session calls for placing students in small groups of three to six students where all will have an opportunity to express their views. These discussions usually extend for three to fifteen minutes, after which the class is reassembled to hear reports given by buzz-group representatives and to discuss further the same material as a total group. This technique may be used either as a regular device to cover course content or as a means of facilitating student planning of class activities. Its main value lies in the opportunity it provides for broad student participation in somewhat uninhibited discussions. The basic procedures are described in the following paragraphs.

1. The discussion question for the buzz session should be chosen with particular care as it will be discussed without benefit of teacher leadership. It must be appealing, clearly defined, open-ended, and relevant to educational objectives. A special effort should be made to develop high interest in the general topic of study just prior to placing the students in their groups. This may involve the use of a film, newspaper clippings, or simply a lively group discussion.

2. The membership of the small groups can be determined on an arbitrary

basis, alphabetically, by rows, and so on. This system will often work if other factors in the total situation are good, such as class morale and the general academic orientation of the students. However, the effectiveness of the buzz session can be enhanced if group memberships are preplanned to ensure a reasonable distribution of ability and leadership. Some attention should also be given to social factors. Most teachers seek to avoid both putting whole cliques together as groups and isolating individual students from any of their friends. Once the groups are established they can be used repeatedly for future buzz sessions on other topics and for other techniques involving small groups. If activities requiring small groups are frequently used, it is often useful to reshuffle them occasionally to expose students to fresh points of view.

3. Prior to placing the students in their groups, the teacher should (a) present the discussion question clearly, (b) designate a recorder for each group, (c) charge the group with the responsibility to submit a verbal and/or written report, and (d) establish definite time limits.

4. Once the small group discussions are under way, the teacher can usually help most by moving about the room to provide facts, clarify the task, or motivate lethargic groups. It is often necessary to extend or shorten the time allotted as groups become more involved in a topic, or perhaps achieve an early consensus. Obviously, it is better to err on the short side if one hopes to have some of the usual lively enthusiasm typical of small group discussions carry over into the large group discussions that follow.

5. Once the class is reassembled for the follow-up discussion, the general procedure is for the recorders for each group to report. Usually the general discussion is then directed toward the resolution of any conflicting views between the individual reports and the development of a class consensus. Many teachers also require that the recorders submit the notes they took during the discussion as a further means of evaluating the small group discussions. For suggestions regarding other types of culminating activities and a detailed illustration of the buzz session see pp. 178-182.

Narratives

The Problem Story. If the truth were known, we would probably find that most of our students acquire their real health concepts and attitudes outside the classroom as they come to grips with real-life situations. Through use of the problem story, an attempt is made to examine and discuss typical situations in the classroom, where mature and knowledgeable guidance is available. This technique is also known as the case-problem or case-study technique, and in a more refined form it is known as the critical-incident technique.¹ In its most basic form it consists of presenting the students

¹Cyrus Mayshark and Roy A. Foster, *Methods in Health Education* (St. Louis, Mosby, 1966), p. 5

are each provided with basic descriptions of a role they are to play in a particular situation and are asked to respond according to their interpretation of how the action might transpire. At the appropriate time the teacher stops the sociodrama and the class discusses the issues depicted. This technique is highly effective provided the class is sufficiently motivated to overlook the limitation of the participants' acting ability and concentrate on the relevant implications. A detailed illustration of this technique is provided on pp. 159-163. The basic procedures are as follows:

1. Select situations for portrayal that are relatively simple, that are clear-cut, and, as mentioned, that involve personality traits or value judgments. Examples of typical situations are a high school junior who is offered marijuana at a party and a seventh-grade girl who asks her parents to allow her to go out on dates without adult supervision. It is usually best to involve no more than four actors in a given sociodrama unless the class has had considerable experience with the technique.

2. Select for the principal roles stable, intelligent students who are neither unduly extroverted nor introverted. This is particularly important when the technique is new to the teacher or the students. If the class has the opportunity to become familiar with the sociodrama, then much less care need be taken in the selection of participants.

3. Outline the basic situation and the characteristics of each actor to the class briefly but clearly. This information can usually be presented verbally to the total class, although it is occasionally useful to present all or certain aspects of a participant's role to him secretly by use of written or whispered instructions.

4. Provide the participants or actors with a small amount of planning time (two minutes is sufficient) to decide upon the basic approach they plan to use in their presentation. This is ordinarily accomplished by allowing them to move to the hallway or to the back of the room for their brief discussion while the teacher prepares the class by pointing out the more important things to look for in the presentation.

5. Use simple props, usually tables and chairs or the teacher's desk. This can add much to the effectiveness of the sociodrama if the setting is explained to the class. (Explain, for example, "Mother and Dad are seated on the sofa," or, "The personnel manager is seated at his desk.") Elaborate preparations are not necessary if the verbal description is clearly expressed.

6. During the actual presentation the teacher may have to assist the actors occasionally with their responses by reminding them of their roles and how such a person might react. The most important function of the teacher, however, is to decide when to terminate the action. This action is usually signaled by the portrayal of a particularly relevant point that demands immediate discussion or, more commonly, when it appears that the presentation is slowing down.

7. During the follow-up discussion it is important to keep the comments

focused on the content of the sociodrama in terms of the words and actions of the participants rather than upon the quality of the acting. Besides being more relevant to class objectives this takes the pressure off the performers and makes it easier to recruit volunteers for this activity in the future.

The Playlet. When it becomes necessary to present a dramatic portrayal of a health concept or situation in a predictable way, the playlet may be used. It differs from the sociodrama in that the dialogue is planned before the performance; however, in many instances little or no rehearsal is necessary. In some situations, such as assembly programs, it may be desirable to stage a full-fledged performance; however, for purposes of health education, the playlet may be presented in the classroom by simply providing scripts to reasonably alert students and asking them to "walk through" the action. This technique, of course, lacks the spontaneity of the sociodrama but provides the teacher with the opportunity to prepare more thoroughly for the follow-up discussion.

Probably the best source of playlets is the teacher's own creative ingenuity. He is in the best position to know the maturity level, the interest patterns, and the educational needs of his particular students. As is the case with narratives, what his efforts lack in professional polish they will usually make up for in their particular appropriateness to his situation. Properly motivated students can often turn out effective playlets, particularly when they are also charged with the responsibility of staging the performance. The teacher can help them most appropriately by providing technical assistance on any scientific aspects that may be involved; the students can usually handle the plot and the dialogue with little if any outside aid. Some commercially prepared scripts are available but it is usually difficult to find those that match the teacher's needs regarding grade level, socioeconomic conditions, and health content.

Community Resources

The local community generally includes many excellent sources of health education information, such as knowledgeable health experts, health facilities of various types, and problem situations suitable for investigation. The teacher must either bring the community into the classroom or send the students out into the community, usually by arranging for interview projects, community surveys, field trips, and resource speakers.

The Small-Group Field Trip. A class field trip is one of the best ways to add realism to a unit of study, but it is frequently difficult to arrange and may be completely impractical. The small-group field trip can often provide a satisfactory alternative (see pp. 361-364 for a detailed example). Using this technique, student volunteers visit health-related facilities in the community and report their experiences to the class. Each visit is made by two to four students who prepare themselves for the visit by prior work in the library. In the class meeting following the visit, the committee

presents a brief oral report to the class, and then a discussion period follows during which all students have an opportunity to question the committee members. In this manner the class hears about and discusses firsthand experiences of other students. Young people often learn more this way than when they are all herded through, with the four or five keenly interested students at the front doing all the learning. The small-group field trip consists basically of sending these students and leaving the rest at school. The basic procedures are as follows.

1. At the beginning of the school year, review both the health education units to be covered and the local health facilities that might possibly be visited. These might include local health departments, mental health clinics, food-processing plants, water treatment plants, ambulance services, and so on. Once the appropriate facilities are selected, conduct a telephone survey to determine whether the personnel of specific facilities encourage visitors and what they have to offer. If encouraging information is received on these basic points, then make further inquiries concerning:

- a. Limitations on the number and frequency of visits.
- b. Most desirable days of the week and hours of the day for visits.
- c. The best length of time to allot for each visit.
- d. The availability of public transportation to the site if appropriate.
- e. The possibility of having pamphlets or brochures about the facilities sent to the school.

As this information is gathered, it should be recorded for future reference. Once it is initially obtained, it can be updated from year to year with little effort.

2. Details of the actual assignment can be tailored to meet specific situations and well-motivated student groups will often devise their own embellishments; however, here is one pattern that generally works well:

- a. Ask the committee to review a number of pertinent magazine articles or other selected readings containing general information on the type of facility or type of health problem their visit involves. Require them to meet and pool the information their individual library efforts provided so they will develop a reasonably good background for their visit.
- b. The student committee should usually take responsibility for its own transportation arrangements, particularly at the senior high school level. At the junior high and upper elementary grades, parents will often provide transportation because only two to four students are involved. Although the trip is often expedited by releasing students from one of their health classes and/or study halls most such trips are scheduled for after school hours or for weekends.

- c. During the first class meeting following the visit, the committee should submit a ten-to fifteen-minute prepared report in the form of a symposium (see p. 126). Very often the balance of the period may be spent in profitable discussion of the findings.

Although this technique can yield meaningful results, it requires well-motivated students to carry it out. Teachers can stimulate this motivation in different ways according to their individual philosophies and the realities of their teaching situations. Some teachers rely on appeals to intrinsic interest and generally solicit volunteers after a good film or lively discussion. Those with a more authoritarian approach require every student to carry out at least one "project" per term, a requirement which can be met in several ways, including field trip participation. Others choose to use an extra-credit system to help involve students in more demanding assignments.

The Large-Group Field Trip. The large-group field trip is "strong medicine" in a methodological sense. When used for an appropriate educational purpose and conducted effectively, it can add substance and meaning to a unit of study far beyond that offered by more indirect devices. However, an ill-conceived trip can easily become an expensive, time-consuming, and even dangerous outing that serves little worthwhile purpose. Thus, the large-group field trip should be used infrequently and only when its educational potentials are thoroughly utilized. A successful trip results only from careful planning.

The necessary planning for the large-group field trip can be roughly classified into two categories: (1) educational considerations and (2) logistical considerations. The educational considerations usually produce the following type of procedures:

1. Generally, the large-group field trip should be planned as the focal point of an entire unit of study. A visit to a state mental hospital, for instance, might properly involve a class or several classes of students in extensive study and preparation for three or four weeks prior to the visit. This study might include both general background information on mental illness, its prevention and treatment, and information on the treatment facility to be visited.

2. In addition to acquiring background information, the students should participate in planning the specific information they should gain for the trip. They might learn from their library work that most progressive mental hospitals are moving toward a "therapeutic community" concept characterized by efforts to make the hospital environment as normal as possible. They might also read of severe shortages of psychiatrists and other professional personnel and of an emphasis on group rather than individual therapy. These might be identified as specific points to investigate. The assignment of specific responsibilities might also be planned by the students. Who is going to investigate what? Often it is impossible for everyone to

visit all components of a large and complex facility; in these instances, student subgroups, properly balanced with respect to talent and leadership, can be planned prior to the trip.

3. During this preplanning stage the teacher can often communicate with the personnel of the facility to make special arrangements for the coming visit. Often small changes in the way time is spent during the tour can produce big dividends. If, for example, a few of the students are permitted to sit in on a group therapy session with patients as actual participants, this experience may provide insights into the therapeutic process that can be profitably shared later in the class sessions that follow the visit. These kinds of special experiences are more likely to be made available when those serving as hosts realize that a visiting group has made a serious effort to prepare themselves as knowledgeable visitors.

4. After the visit there should be a systematic debriefing to evaluate, interpret, and consolidate the information gained on the trip. If the class was organized into subgroups for the visit, then a series of symposiums (see p. 126) might be appropriate. If students from different classes or sections were involved, it is often worthwhile to arrange for a sharing of information and experiences among these normally isolated groups. This can be accomplished by exchanging symposium groups between sessions meeting at the same hour or by combining sections into assembly meetings.

The educational benefits also depend on the proper handling of the logistical aspects of the trip. As with most other aspects of teaching, these procedures vary considerably from situation to situation. However, in virtually all instances, the teacher's first step is to discuss the possibilities of a field trip with the building principal or some other appropriate administrative representative. Such a person should be of good help concerning *the mechanical aspects of the field trip, which normally include provisions for*

- a. Securing parental permission for student participation.
- b. Excusing students from other classes on the day of the trip.
- c. Providing for additional adult supervision, if indicated.
- d. Transportation arrangements, school buses, parental car pools, and so on.
- e. Contingency plans for possible problems such as missing students, illness, accidents, or student misbehavior.

The Resource Speaker. It is often simpler and more effective to bring part of the community into the classroom in the form of a resource speaker than it is to take classes of students into the community. As with the field trip, maximum benefits will be derived from the resource speaker only if the students have prepared themselves to be knowledgeable listeners. For

this reason the appearance of the guest speakers is best scheduled for the later part of the study unit so that the students will have an opportunity to become acquainted with both the general area of study and the specific topic the resource speaker will present. Procedures are as follows:

1. Invite as resource speakers only those persons who can offer substantially better coverage of a particular topic than the regular teacher. The time and effort involved usually do not justify the use of this technique merely for a change of pace. Try to assess the potential speaker's general effectiveness beforehand; if this is impossible, then set up a small-scale appearance for his first visit, such as one period with a single class rather than all day with a large group. Give particular attention to the possible interaction of the speaker and the group. A public health officer with good technical knowledge and poor speaking ability might do little for a flighty group of eighth-graders, but he might provide an excellent experience for a group of college-bound seniors sophisticated enough to draw him out.

2. Once a speaking commitment from a person of proved effectiveness is secured, every effort should be made to provide maximum exposure. When the speaker makes himself available for the entire school day, sections that meet concurrently can be combined. If the speaker will be at the school for only a short period of time, it is sometimes worthwhile to arrange for an assembly hour for the entire grade level or perhaps the entire student body. If such measures are impractical, then one or two representatives from other sections may be excused from other obligations to attend the single presentation and report to their regular health sections later. At the very least, a tape recording should be made so that all or part of the presentation can be played back to other health classes.

3. When the resource person is contacted, he should be acquainted with the size of his potential audience and its age, sex, academic ability, and general interests. Also, of course, he needs to learn of the students' background in his speaking topic. Often outside experts assume that any audience they speak to knows nothing about their topic. This assumption should not apply to the class of any conscientious teacher. Arrangements for any possible audiovisual needs should also be discussed at this time.

4. When the resource person visits, the teacher should introduce the speaker and his topic adequately but briefly. Time is usually short and student response is generally based primarily on the visitor's actual presentation rather than on any fascination with his prestigious credentials. Once the speaker begins his presentation, the teacher should note pertinent points for later discussion either during a question-and-answer period following the speaker's talk, or in a succeeding class session. Occasionally, the teacher may need to step in and provide leadership during a discussion period that the speaker is attempting to conduct, but this action should not be taken too hastily, as the speaker may wish to use his own format. An especially inept speaker may start to flounder badly with a particular group, in which case

the teacher should move in and convert the presentation to a discussion session. Fortunately such occasions are rare.

5. The teacher and students should express their appreciation to the speaker following his presentation. Shortly after the visit the teacher should send him a note of appreciation. In addition to being courteous, this procedure may make it easier to secure his services again in the future.

Audiovisual Techniques

The Overhead Projector. In recent years the overhead projector has developed into an extremely popular and versatile teaching tool. It consists basically of a lighted stage upon which transparencies are placed and a

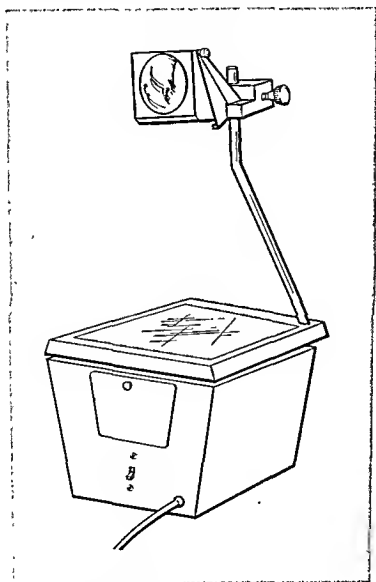


Figure 7-1. The overhead projector.

specially designed lens which projects the transparency material on a screen (Figure 7-1).

The transparency generally consists of a sheet of clear acetate, approximately $8\frac{1}{2}$ by 11 inches, mounted on a cardboard frame. Through the use of either commercially prepared or homemade varieties, printed material, diagrams, and illustrations can be effectively displayed. One of the more attractive features of this projective technique is that the teacher is able to remain at the front of the room and retain eye contact with his class while using the projector. Many teachers also like the projector because it can be used in a fully lighted room and because the teacher can control the material by revealing only part of the transparency at any given moment.

These features make the overhead projector a "teacher-oriented" system. This basic characteristic immediately accounts for the overhead projector's principal strength, weakness, and popularity. It provides highly effective support to the traditional lecture-discussion approach. Teachers who are used to doing most of the talking take quite readily to this technique and find that their sometimes tedious presentations are much improved. Although the overhead projector is compatible with a teacher-centered approach to methodology, it does not have to lead in this direction. Through the use of properly prepared transparencies, concepts can be presented and questions posed which can initiate lively, student-centered class discussions. As long as this technique is used to encourage more, rather than less, student participation in the teaching-learning process, it can be a highly effective addition to a creative teacher's bag of tricks. Basic procedures are as follows:

1. Commercially prepared transparencies often come in sets of ten to twenty, covering a single health topic; a teacher's guide is usually included. The material must be reviewed thoroughly and a decision made on whether to use the whole set or select only those transparencies particularly pertinent to one's course of study. This decision should be based on the similarity of the package to the content to be covered and the extent to which other methods will be used.

2. The creative potential of this technique can be best realized by use of teacher-prepared slides. Few other media are so adaptable to the amount of time, skill, and interest possessed by the individual teacher. Somewhat crude but remarkably effective transparencies can be made from a few sheets of acetate and a grease pencil. Satisfactory results have been achieved by using a few sheets of old X-ray film and a typewriter correction pencil. At the other extreme, sophisticated reproduction processes, color-lift techniques, adhesive color film, and other specialized materials make it possible for the teacher to produce transparencies of professional quality. Although the technique of transparency production is relatively simple, the variations are endless. Information provided by such sources as the Minnesota Mining and Manufacturing Company plus the teacher's ingenuity and experimentation are all that are needed for effective handling of the material involved, so no

attempt will be made to cover that aspect here. However, some general points merit special emphasis:

- a. The basic rule to keep in mind is *one idea to a transparency*. The primary information should be clearly and simply stated and set apart by color underlining from supportive or secondary information.
- b. Secondary information should be kept to a minimum and used only to clarify or dramatize the main idea. Written material should be kept to the minimum. Complex explanations, interesting sidelights, and so on, should be presented by the teacher or drawn out in class discussion rather than embodied in the transparency.
- c. Letter size should be large enough to permit easy reading from the back of the room; the smallest letter on the screen should have a height of at least 1 inch for every 30 feet of viewing distance.
- d. Whenever possible, use simple illustrations and diagrams rather than text. Be willing to experiment with your own "amateurish" drawing, for the projective technique adds a certain professional quality to any material you place on the transparency. The important aspect is how effectively the drawing communicates the idea.²

3. In most classrooms, the screen should be placed on an angle in a front corner of the room, preferably on the window side (Figure 7-2). This arrangement enables the teacher to remain at the front of the room without obstructing the view of any student. The screen should be placed as high as possible and, if construction permits, the top should be tilted forward to minimize distortion of the image (keystoning). Although these procedures are desirable, transparencies simply projected on a wall can still convey an idea effectively.

4. In addition to displaying information simply and effectively, the overhead projector enables the teacher to reveal only a portion of the information at any given moment. This is accomplished by use of (a) the revelation technique, (b) overlays, and (c) the on-off switch. It is important for the teacher to learn to use these devices properly. The revelation technique involves covering certain portions of the transparency with cardboard or heavy paper until the proper time for its presentation. In its simplest form, it consists of merely sliding a piece of oblique material off a transparency in successive stages from the top down as the discussion proceeds. Overlays are simply additional transparencies that are placed over the first to add new elements to the image on the screen; the teaching considerations that govern the use of the revelation technique also apply to the use of overlays. Release

²Adapted from Morton J. Schultz, *The Teacher and Overhead Projection* (Englewood Cliffs, N.J.: Prentice-Hall, 1965), pp. 28-29.

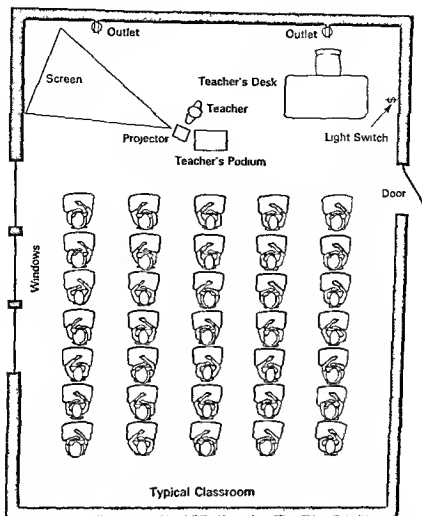


Figure 7-2 This diagram typifies the ideal classroom placement of the overhead projector [Reprinted by permission from Morton J. Schultz, *The Teacher and Overhead Projection* (Englewood Cliffs, N.J.: Prentice-Hall, 1965), p. 19]

new material only when you are ready to discuss it to avoid distracting the student with a transparency that does not apply to the immediate point. The periodic exposure of new information helps sustain the interest of the class. When the material is not needed, the projector should be turned off. This enables the class to redirect its attention to the teacher or to students participating in a class discussion.

Educational Films. The conventional 16-mm sound film is one of the most commonly used teaching aids in health education. In addition to the inherent attractiveness of this medium, much of its popularity among health teachers is due to the great variety of health-related films that are generally

available. Dozens of organizations of all types, including commercial firms, governmental and voluntary health agencies, and charitable foundations, produce health films which they make available to schools at little or no cost. Unfortunately this profusion of film tends to encourage film abuse, as well as film use. Some teachers subject their classes to a quick succession of films containing complex and sometimes irrelevant material, while providing them with little time to discuss or properly digest the bewildering array of facts and ideas. Students may be shown the same film three or four times as they progress through the grades in a single school system, or they may arrive in class for the second day of a unit on drug abuse only to be greeted with a nutrition film that arrived two weeks after they completed their study of that topic.

As with other teaching techniques and materials, films should be employed for appropriate and well-defined purposes. These purposes can be reduced to two broad categories. The first concerns the ability of film to illustrate all manner of complex phenomena more conveniently and effectively than by other means. Microscopic and time-lapse techniques can be used to show the entire process of cell division or the entrance of a sperm cell into an ovum. The student may also see exactly what happens to manikins with and without seatbelts during an auto collision. A series of schematic illustrations supported by a well-conceived narrative may provide the student with a clear concept of the immunity process. Many such technical subjects can be effectively presented in a film. However, all complex phenomena are not physical or biological. Films are often more effective than words in conveying real understanding of such concepts as hostility, maturity, or affection.

A second major purpose films can serve is that of providing health material with emotional impact. Whether it be the panic and tragedy of an auto accident or the pleasure and delight of a young mother holding her newborn child, the valid presentation of emotional situations is necessary if health concepts are to be conveyed effectively and realistically. Films can probably do this better than any other technique. A word of caution is needed; emotional content in films serves little useful purpose unless (1) it contributes to an accurate and well-balanced presentation of a topical area, and (2) it is interpreted properly and backed up with practical information concerning related health behavior.

Two of the most important considerations in the selection of films to meet these purposes are their relevance to the topic and appropriateness to the maturity level of the students. With regard to relevance, the teacher should bear in mind the breadth of most content areas in health education. A 40-minute film showing the manufacturing of flu vaccine is in the communicable disease category, but this does not make it relevant to a unit of study calling for heavy emphasis on venereal disease. Films designed to teach medical students about various skin disorders might have some perverse entertainment value for eighth-graders but would probably do little for their practical

needs. The quality of the acting, authenticity of the setting, and up-to-date-ness (hemlines, auto styles, etc.) are important considerations when an impact on attitudes or values is desired. These considerations are of lesser importance when cognitive objectives are the primary ones.

Some idea of the degree to which a particular film meets the criteria for selection can be obtained from the film description and from other secondary sources; however, a final decision is seldom justified until the film is previewed. In addition to determining the film's basic fitness for use, the teacher can also identify the relevant points covered by the film and note those aspects that the student will want to question or discuss. Once a good film is selected and previewed, the proper handling of the film in the teaching situation is greatly simplified. The following are some commonly used procedures:

- The film should be presented at the appropriate time within the teaching unit. Films that are short on content but long on interest values should come early in the unit. Those that present complex subject matter might well be delayed until the students have developed some grasp of the preliminary concepts; those with a culminating or summarizing quality are normally placed at the end of the unit.
- The basic purpose of the film should be explained to the class briefly but clearly immediately before it is viewed; alert them to the basic points of the film by either a verbal itemization or a printed film guide.
- Extensive note taking should generally not be required during the film; the action is often fast and the room dark.
- The early part of the follow-up discussion usually should be reserved for student-initiated questions and comments. After this is completed or begins to lag, the teacher can undertake a brief but systematic review of the film's highlights.

The basic mechanics of handling the equipment may require very much or very little of the teacher's attention, depending on the type of audio-visual service available. Fortunate teachers will receive highly effective help from an audio-visual coordinator or his assistants; others will be virtually on their own. Regardless of the situation these basic considerations apply:

- Competent operation of the equipment is essential for a good educational experience. If good operators are not available, the teacher must train himself in the use of the equipment.
- If at all possible, have the film set up and all components tested well before class begins: Is the film threaded properly? Does the lamp

work? How's the focus? Is the room dark enough? Is the sound adjusted properly?

- If practical, delay the rewinding operation until after class dismissal so as not to detract from the follow-up discussion.
- The astronauts are fond of referring to "Murphy's Law," which cautions that "if something can go wrong, it will." Remember that the film may not arrive. The equipment may arrive without an extension cord. The lamp may burn out. Take all precautions and have an alternate lesson available.

Although films are available from many sources (see p. 116), the most convenient source is the school or district film library. Encourage the purchase of films that will not quickly become dated, such as those presenting basic scientific concepts. Films of current interest should be obtained on a loan or rental basis.

Television. The many obvious advantages of television as a medium of communication would make it appear to have exciting potential for all fields of education. However, after several years of relatively ambitious experimentation, this potential is still largely unrealized. Many of the early disappointments seemed to result from (1) an underestimation of the demanding nature of quality television teaching, and (2) inappropriate attempts to use television as a substitute for good classroom teaching. Now that these hard lessons have been learned, educational television in both its open-circuit (ETV) and closed-circuit (ITV) versions is becoming increasingly valuable as an instructional aid. A fairly common pattern seems to be developing in districts where it is routinely used in the classroom as a supplement to health education. Often a public school or university teacher whose teaching style and personal qualities lend themselves to television will be featured in a series of twenty-minute programs which parallel the course of study. These programs are viewed by the students during their regularly scheduled forty- or fifty-minute health class. Because the class is viewing what is essentially a "health film," the teaching procedures are similar to those for conventional sound films.

- Review the content of the program carefully before it is presented and preview it if this is possible.
- Select for use in your classroom only those programs that will present material you cannot present more effectively by other means. In most situations, the classroom teacher controls the on-off switch.
- Prepare students for the programs and plan appropriate follow-up activities.
- Note taking is possible with this medium, so encourage students to take notes if the material leads itself to this activity.

The many programs on health topics prepared for conventional home viewing provide an effective but often neglected source of supplemental information for the health education class. These are commonly offered as documentaries or as part of a series focusing on contemporary problems. The teacher can learn of such programs through conventional television guides and, although previewing is impossible, some reasonable assessment can usually be made from preliminary descriptions. Some possible ways to make use of these programs are the following:

- Announce the date, time, and channel of promising programs in all health classes and encourage students to view them.
- When the program topic happens to apply to the present unit of study, secure volunteers or assign one or two students from each section to view the program and report to the class; encourage as many as possible of the other class members to view it on their own.
- Knowledge of particularly well-recommended forthcoming programs or series of programs will occasionally warrant reshuffling of the course calendar to coordinate a unit of study with the television offerings.

Programmed Instruction

Programmed instruction takes many forms; however, certain characteristics are usually present. Information leading to a precisely defined objective is released to the student bit by bit while he is constantly required to make some type of overt response. As Schramm describes:

His response may be to fill in a word left blank, to answer a question, to select one of a series of multiple choice answers, to indicate agreement or disagreement, or to solve a problem and record the answer. As soon as he has responded to the item, he is permitted to see the correct response so that he can tell immediately whether his response has been the right one.¹

Generally, programs are designed so that the student is correct more than 90 per cent of the time even though he is gradually being led deeper into subject matter with which he is unfamiliar. This constant and usually positive feedback appears to keep most students well motivated and highly involved while working largely on their own.

The most common type of programs are linear or Skinnerian programs, which generally utilize "fading" as their principal technique. New terms are first described in a clear-cut and familiar context. Then the student is asked

¹Wilbur Schramm, *Programmed Instruction Today and Tomorrow* (New York: Fund for the Advancement of Education, 1962)

to apply these terms to a series of situations in which the clues as to their use gradually become less obvious. Soon the student finds himself using the new term or fact properly with no artificial cues from the program. A second major type of program is the Crowder or branching type of program. This type of program generally features a multiple-choice format combined with a more sophisticated way of dealing with wrong responses. The Skinnerian program usually corrects a wrong response by immediately supplying the proper answer; in a similar situation the Crowder program generally provides a brief explanation of why the response is incorrect and sends the student back for another selection. This often increases the time needed for the student to complete the program but, by providing responses tailored to his particular misconceptions, presumably accommodates his individual needs.

Programs come in a great variety of packages—some in the form of books or booklets, some as material for simple teaching machines, and still others for use in highly sophisticated computer-assisted instruction. Although these modes of presentation vary somewhat in efficiency and cost, the principles governing their construction and use remain essentially the same.

During the past few years there has been a great rush by various commercial firms to develop and market programs for public school use. As one might suspect, a great many of these “rush jobs” are of doubtful quality and few of any type are available for the field of health education. Many teachers are fully capable of devising their own programs after a brief exposure to the fundamentals of construction (the authors have seen decent programs resulting from a three-semester-hour course). However, program construction is a time-consuming task. At the present time, the most practical strategy for most teachers is to remain alert to the appearance of good health education programs on the market or, if the resources are available, to cooperate with other teachers on a district-wide basis to construct programs for local needs.

The basic guidelines for the incorporation of programmed instruction into classroom activities are not well defined; however, the following are a few basic hints that seem valid at this time:

- In their present stage of development, programs generally are more effective in presenting cognitive material that lends itself to precise definitions as compared with content heavily weighted with attitudes or value judgments.
- Programs appear useful as a means of providing remedial instruction to students who failed to gain important knowledge because of extended absences, poor class performance, and so on.
- Programs also can serve as a means of enriching a program for students who can profit from content more challenging than that provided by regular class activities.
- Programs may be used to relieve the teacher of the burden of routine

instruction by "handling" one portion of a class while he works with the remaining students.

Ideally, programs develop into disciplined and efficient automated tutors that may free the teacher for the more challenging and creative aspects of teaching.

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PART III

Creative Teaching Applied

"It must be remembered," said Vaihinger, "that the object of the world of ideas as a whole is not the portrayal of reality—this would be an utterly impossible task—rather to provide us with an instrument for finding our way about in this world more easily."

for the Mid-Town Manhattan Study sought to determine the mental health of 175,000 persons living in a 200-square-block area of Manhattan through the use of psychiatric interviews.² According to their criteria, they placed the majority of this population (58 per cent) in the "mildly to moderately disturbed" category. They found less than one in five (18.5 per cent) persons "essentially well in terms of mental health." Those remaining (23.5 per cent) were classified as "marked or severely" disturbed and presumably strong candidates for professional help. This intensive study makes the one-in-ten estimate of the National Association for Mental Health appear quite conservative, rather than exaggerated. Although the results of this single study of a relatively small population in an urban environment cannot be generalized to our total society, they do provide a definite indication of the size of this problem when viewed in conjunction with other evidence.

The Crucial Years

But what about the school-age child? Most of us accept the fact that adolescence is fraught with potential for emotional trauma that may produce life-long scars on adult personalities, but we tend to dismiss the problems of the elementary school child as unimportant. There is a tendency for the normal, immature, boisterous, and often irrational behavior of children to mask the symptoms of emotional disturbances exhibited by a small but significant minority. The following case dramatically illustrates some important aspects of the mental health needs of children in this age range:

In the fading days of the summer of 1965, in our Nation's capital, an 11-year-old boy was found spending his nights huddled in an apartment hallway with the only friend he knew—a stray dog. As millions of his young fellow citizens were beginning their zestful return to school, he devoted his full attention to the quest for survival—managed, somehow, through the haphazard handouts of food and drink from curious tenants, and the affection of the dog he had claimed as his only companion.

Taken finally by police to a detention home, the now retarded boy's story unfolded: Through his meager decade of life, begun in a broken home, he had ricocheted from court to welfare department, from mother to foster home, from institution to psychiatrist. He had been tested but never treated, examined but never loved. So it was that he had long begun to spend his own love on dogs, not people.³

²Leo Srole et al., *Mental Health in the Metropolis: The Midtown Manhattan Study* (New York: McGraw-Hill, 1962), p. 138

³U.S. Department of Health, Education, and Welfare, *Mental Health of Children*, PHS Publication No. 1396, Washington, D.C., 1965, p. 1

Although this case admittedly represents an extreme example, the phrase "tested but never treated, examined but never loved" sums up the situation for many children who develop mental illness. More specifically, the need of such children for treatment is vital but staff and facilities are not available. Facilities are jammed and a six-month waiting period is not unusual for a child who needs help. When the treatment is finally forthcoming, it is often superficial and ineffective.

Many communities have responded to this need by developing community mental health centers and specific treatment programs for children, but although much has been accomplished, it has become apparent that these efforts alone were not enough. Nadine Lambert, expressed this realization quite well when she stated that "the professionals in the field began to be bitten by the bug of realism [consequently] . . . there did come a time not very long ago when it was apparent that we would probably never have enough child guidance clinics and mental health manpower of various needed kinds to deal with these problems."⁴ She then pointed to the obvious conclusion. We must switch our emphasis to the prevention of mental illness and beyond that to the promotion of mental health.

Prevention and Promotion

The practical application of this philosophy to the school program involves attention to (1) mental health services, (2) the emotional environment of the school, and (3) the teaching of mental health content. It is the third category, of course, that this text is most concerned with, but some knowledge of the first two is necessary if instructional needs are to be viewed in proper perspective.

Mental Health Services. The need for psychiatric treatment for advanced cases of mental illness has been discussed earlier. However, effective personal guidance of an informal nature on the part of well-trained and sympathetic teachers often leads children away from self-defeating behavioral patterns long before their problems reach the clinical stage. The more difficult problems in this subclinical category may often be handled by guidance workers or by school nurses who are trained in this area. In addition to these direct services, school personnel can serve an important preventive function by identifying and referring children who appear to need psychiatric help. When this is done effectively, many potentially serious cases are brought to treatment at a time when help is most beneficial.

The Emotional Environment. As an important living environment, the school is rivaled only by the home in terms of contact time or of presenting crucial challenges to the child's adaptive capabilities. Recognition of this importance during recent years has resulted in increased efforts to structure

⁴U S Department of Health, Education, and Welfare, *The Protection and Promotion of Mental Health in Schools*, PHS Publication No. 1226, Washington D C. 1965, pp. vi, vii

the total school environment in a manner designed to have a positive effect on mental health. This has included everything from changes in the basic architectural design of elementary schools to make them less massive and threatening to children, to changes in general classroom procedures, assignments, and discipline methods to produce a healthier emotional climate. Considerable attention has also been given to the scheduling of the school day to balance classroom work and recess or activity periods and to provide an adequate lunch period.

The Role of Health Education. A third major aspect of the school's total effort in behalf of mental health is in teaching children about personality development, habits of mental hygiene, and ways to handle emotional stress. This is the phase of the program that involves the teacher of health education most directly and, unfortunately, this is the phase that has received the least emphasis and support. Because of the extremely broad and ill-defined nature of content in this area, many educators have questioned the practicality of teaching mental health as a specific content area. Some choose to ignore it completely and concentrate on the purely physiological aspects of health. Others omit it as a specific area for exactly the opposite reason; they see mental health as too large and relevant a topic to be confined to a single unit or content area. The personnel of the School Health Education Study took this latter approach.¹ They designated the mental aspect as one of the three basic dimensions of health, along with the physical and social, and included mental health material within all ten of their curriculum areas.

The format adopted by the School Health Education Study is practical, logical, and perhaps the soundest arrangement from the standpoint of curriculum theory; however, the average health teacher is likely to find that his district treats mental health as a separate area in its curriculum guide. Furthermore, once the teacher becomes familiar with the teaching of basic concepts in mental health, he should be able to deal with such material effectively regardless of the particular type of curricular organization found in his situation. For these reasons, mental health is treated as a distinct health topic in this text.

OVERVIEW FOR THE ELEMENTARY LEVEL

What can be done to help the elementary school child develop a strong and healthy personality? Any intelligent answer to this question must take into consideration the basic emotional characteristics of children at these ages. It is beyond the scope of this text to present a thorough discussion of such characteristics, but a brief review may increase the meaningfulness of the specific teaching recommendations in the following section.

¹School Health Education Study, *Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press, 1967)

The Preschool Period

If the primary child is fortunate, he will have a solid base to work from as he tackles the social challenges of school. During his preschool period, he will have sought to become a "little person" in his own right within the home and within his neighborhood play groups. If he succeeded, he will enter kindergarten or first grade with an appropriate sense of his self-identity. The extent to which this has been accomplished will in large part determine how well he progresses in his next stage of development.

The Fundamental Task

From a social and emotional standpoint, the fundamental task that elementary school children must accomplish can be stated quite simply if one is permitted to overgeneralize to some extent. They must learn to draw a significant amount of their emotional support from their peer groups, particularly from their companions of the same sex. This basic need immediately leads to a whole series of complicated events. There will be a corresponding decrease in the support needed from the parents. The primary child will shift considerable dependence to the classroom teacher and this new found source of strength will gradually be dropped in favor of the gang during the intermediate grades and the gang demands that children qualify for membership by demonstrating a reasonable degree of independence and personal identity. "Momma's boys" and "Teacher's pets" are generally excluded.

The elementary child's task is complicated by the need to preserve his status with both his age-mates and the significant adults in his life. Consciously or unconsciously, elementary children are aware of their need for the emotional and physical support of parents and teachers while at the same time sensing that their future lies with their age-mates. The conflicting demands that these two groups place on the child are well known, as is the fact that most children somehow manage to accommodate these conflicting forces. This is generally not accomplished without squabbling, disappointments, and occasional threats to leave home, but, after all this, we find that the normal child has developed a reasonably secure spot for himself within the gang structure. This then serves as a point of departure for his journey into the unknown world of heterosexual activities during adolescence.

Values and Standards

Stone and Church, in their book *Childhood and Adolescence*, highlight an important characteristic of elementary school children that often does not receive proper emphasis—their "moralistic" quality, their tendency to react strongly to anything that appears inconsistent or unfair.⁴ Issues are

⁴L. Joseph Stone and Joseph Church, *Childhood and Adolescence*, 2nd ed (New York: Random House, 1968), p. 414

"right or wrong," "black or white," and children tend to pass severe judgment on those who violate the rules. Later on, in the true "gang state," they tend to develop strict codes which may or may not be formalized in writing, as in the constitution of a "secret society."

The inflexible quality of their standards while they are still busily internalizing adults standards and values probably makes it difficult for children to avoid frequent violations of these requirements. This provides some explanation for their tendencies toward rationalization, denial, and self-justification, for their secretiveness and argumentativeness. When these measures fail to prevent or release the anxiety that results from being unable to meet the rigorous standards set by both adults, peers, or oneself, it may be expressed through other less appropriate outlets. It may take the form of fear of some nonexistent thing or situation, or perhaps exaggerated fear of some real but minor factor. Excessive fantasizing, shyness, or, at the other extreme, excessive hoisterousness or bullying may result.

Degrees of Success

A few children handle the challenges of this period in outstanding fashion; these fortunate ones sail on into adolescence unencumbered by unresolved conflicts or emotional scars that might limit their development. A few, at the other pole, fail miserably and wind up on the waiting list of community mental clinics. But the vast majority meet with indifferent or mediocre success, and they go on to mediocre careers as adolescents. They then become the adults displaying the characteristics that enable researchers to classify large portions of the population as mildly to moderately mentally ill.

It is impossible to determine the exact status of the mental health of the population in general, or of elementary school children in particular. By definition, most children are normal, but it is apparent that "normal" is far from "ideal." Almost all children show the need for improvement in their mental and emotional traits. Health educators generally feel that direct educational efforts can contribute significantly to this improvement.

INSTRUCTIONAL APPROACH

Thus far we have discussed the "why" of mental health. Once this question is resolved we next must face decisions concerning *what* content and *when* and *how* it is to be presented. There is probably less agreement on the content in mental health than in any other phase of the health curriculum. As is so often the case, disagreement commonly occurs between those who demand that content be immediately useful and directed solely at practical problems and others who call for emphasis on basic scientific principles of long-range value. As we probe a little deeper into the problem of content selection, we generally find that useful principles can be illustrated with concrete examples from the child's realm of experience. This provides the opportunity to obtain the major benefits of both points of view.

Suggested Concepts

The concepts suggested here are based on a review of a wide variety of sources.⁷ Lists of this type are seldom appropriate for specific situations; omissions may be apparent, particularly in terms of local needs. However, the authors feel that these mental health concepts are representative of those commonly found in elementary school health education curricula. They are expressed in somewhat technical language for teacher use; their implementation requires translation into language and situations suitable to the grade level involved.

1. *People possess many similar personality traits, yet each person is unique.* Each person is distinctive in some way from anyone else in the world. It is useful to classify and study various characteristics; it is often beneficial to emulate desirable qualities we see in others. Even when this is done, a certain degree of individuality always remains.

2. *As people mature, their behavior generally becomes more effective, constructive, and self-directed.* This occurs as a result of physical growth and development, learning experience involving both adults and playmates, and a good deal of individual effort; this change benefits both the individual and those around him.

3. *Society's expectations of behavior vary according to the age of the individual.* Behavior that might be appreciated and rewarded when exhibited by a young child may be viewed as part of the normal responsibility of the older child. As each person matures, people keep expecting more from him; if he should fail to show this progress, disappointment and conflict often result.

4. *Mood and personality are affected by a wide variety of factors.* Experiences with one's parents, the presence or absence of brothers or sisters, one's inherent physical and mental characteristics, the reactions of others to these characteristics, all contribute to both temporary moods and our long-term personality traits.

5. *Mood changes and swings represent a part of normal behavior.* Almost all persons find themselves very depressed sometimes and very elated at other times; it is often difficult to understand why these changes happen.

6. *Emotions are expressed in many different ways.* Persons who lack confidence sometimes behave as if they feel superior; extreme happiness sometimes brings tears; parental love sometimes takes the form of severe discipline.

7. *Much of human behavior consists of habits which can be cultivated or eliminated with proper practice.* Like tooth brushing and table manners, larger aspects of personality such as concern for others and self-reliance

⁷Most helpful were *Health Concepts: Guides for Health Instruction* (Washington, D.C.: National Education Association, 1967), "Mental Health in the Classroom," special issue of *The Journal of School Health*, Vol. XXXVIII, No. 5a, May, 1968, and *School Health Education Study: Health Education—A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press, 1967).

can be developed to the point that they occur without conscious effort.

8. *Good friends are needed and can be cultivated.* Most people need someone whom they can depend on for sympathy, understanding, and companionship; friendship is a two-way street; persons who extend these services to others generally acquire good friends in the process.

Suggested Techniques

The content of mental health units is inherently abstract. No one has actually seen self-confidence, happiness, responsibility, and love, yet these are the fundamentals we deal with in this content area. Because these concepts cannot be concrete, the teacher should be sure that the examples used are real to the child. The old axiom of selecting content from the child's realm of immediate experience should be applied whenever possible. The teacher should link basic concepts of mental health with common school situations. Once identified, these events can either be used for incidental teaching at the time they occur or worked into a formal presentation on the topic of mental health.

Role playing and other short dramatizations serve to illustrate concepts in concrete form while at the same time capitalizing on the elementary school child's natural inclination to imagine and pretend. This also provides for a certain degree of freedom and movement, at least for the actors, which the children will enjoy. By keeping the individual playlets short and rotating the various roles, it is possible to involve most of the class actively while conforming to the restricted attention span typical of young children.

Practical considerations will require that the children adopt a more passive role during many of the instructional sessions. In such cases, pictures can help to add realism and at least a vicarious type of involvement. These can range from simple stick figures on the blackboard, through magazine clippings, to elaborate presentations involving projectors of various types. When these are combined with active classroom discussion, a favorable learning situation will likely result.

As children move along into the upper elementary grades, the textbook becomes increasingly useful as a teaching device. However, textbook material, although useful as background information, probably does not make any real impact on the child's attitudes, values, or behavior until it is discussed and examined. This appears to be particularly true in the case of concepts related to mental health and personality development.

PRACTICAL APPLICATIONS: ELEMENTARY LEVEL

In this section examples of workable techniques and general approaches to the teaching of content related to four specific concepts will be presented. These examples will be divided between the primary and intermediate levels, with the first example of the two at each level presented in considerable detail.

I. Ups and Downs

The ability to exert a moderate degree of control over one's emotions constitutes an important characteristic of the healthy, mature personality. One common way in which this trait is manifested is in the avoidance of overreactions to temporary moods of anger or depression; if this can be accomplished, the process of getting rid of these unconstructive patterns will not be complicated by ill-chosen words or actions that often deepen the undesirable mood. The mature person learns that anger soon passes if it is allowed to and that time often rids one of depression. Knowledge of the transient nature of most mood states often makes the unpleasant ones more endurable and tends to strengthen one's efforts to defer irrevocable actions until a better state prevails. Everyone probably learns this to some extent, sooner or later, as a result of normal living experiences, but this process can be improved with the proper type of formal study.

Concept: Mood changes and swings represent a part of normal behavior.

Pupils. Developed for third-grade boys and girls of average socioeconomic status; also recommended for grade four.

Technique: Sociodrama.

The general procedures for use of the sociodrama were described in Chapter 7 (pp. 131-133); only certain specific points require attention here. The third-grade child usually responds well to this technique because he often combines the primary child's love of make-believe with sufficient maturity to act out various role situations effectively. The teacher should keep the character descriptions brief and restrict the content of the drama to familiar situations. The action should be brisk and extend no more than two or three minutes.

THE EXAMPLE

Just as the class was finishing up its reading lesson, Mrs. Downey asked them to turn back to a page describing a family squabble.

"All right now, boys and girls, please turn back to page 28 and look at the picture of Jimmy talking to his mother." After everyone had found the page, she asked, "What is he saying to his mother in this picture?"

One of the boys answered, "He's calling her the meanest mother in the world."

After the small ripple of laughter that this produced died down, Mrs. Downey led the class in a brief discussion concerning the reasons for such a statement. The class generally agreed that Jimmy probably did not really mean what he said and that his mother also seemed to

be in a cranky mood that caused her to be too hard on Jimmy that day. With the class thus drawn into the topic, Mrs. Downey began the main part of the lesson.

"Now let's see if we can find out why mothers act the way they do; I would like to have some of us act out some little plays or shows about mothers and their children."

Mrs. Downey had used this device successfully on previous occasions, so this announcement produced an air of pleasant anticipation among the pupils; a few hands were already up as the children attempted to volunteer for parts or roles in the "play."

A Swift Kick. Mrs. Downey selected Mary to play the part of the mother and asked Bill and Jessica to pretend that they were children playing at home on a Saturday afternoon. The "mother" was directed to use a make-believe dustcloth on the "furniture" (Mrs. Downey's desk) and the "two children" were seated at the "kitchen table" (a small table at the front of the room) playing with a set of interlocking construction blocks. Immediately after making these assignments in the presence of the whole class, she whispered some specific directions to each of the players, then asked them to begin.

"Mother" immediately became very busy dusting the make-believe furniture and the "children" started assembling some actual blocks in a hit-and-miss pattern. After a couple of moments the "children" got up and walked over to their "mother." Bill spoke first.

"Mother, we're hungry and thirsty; could we have some juice and cookies?"

Jessica could see that "Mother" was looking rather cranky, so she quickly added, "Please, Mother. We've been good all afternoon."

"Mother" puffed herself up and exclaimed, "You most certainly cannot have any juice and cookies! You've done nothing but make noise and get on my nerves all day! You can both march right to your room and pick up all that junk up there; I'm tired of doing all the work around here!"

With this, the two "children" turned around and walked off while making a rather corny effort to cry.

What's the Matter? Mrs. Downey intervened at this point. "I think this would be a good place to stop and try to figure some things out; that was a good job of acting that you three did! Can someone guess why 'Mother' was so gruff with the 'children'?"

Tom, who tended to be a chronic trouble-maker, said that this was just the way that mothers are; he implied that no special reason was necessary to account for this reaction. There were a few nods of agreement among the other boys and girls, but Mrs. Downey also observed considerable restiveness on the part of the pupils who disagreed with this theory, so she asked, "Does anyone have a different idea?"

Angela thought that "Mother" probably had a cold or was feeling a little bit sick, and many of the pupils appeared to support this explanation.

"Would this be a reason for 'Mother's' crankiness?" asked Mrs Downey.

After seeing that most of the class agreed, she said, "Let's find out."

She looked at Mary, who was still standing on the "stage" and asked, "Mother, were you feeling sick or ill today while you were cleaning the house?"

Before the sociodrama started, Mrs. Downey had whispered to Mary that "Mother" didn't like to clean house and that the house was very dirty that day, and also that the job had made her very tired and the "children" had been very noisy. With this information in mind, Mary answered a bit indecisively.

"No, I wasn't exactly sick or ill "

Mrs. Downey decided to reinforce this valid reason even though it happened to be incorrect in this case.

"I think most of us agreed that a cold or some other small illness could make a mother act harshly toward her children; that was a good guess Angela, but this time there was another reason. Does anyone have another idea?"

Bonnie, who had been very quiet throughout the whole discussion, raised her hand and said, "Maybe she was just tired from doing all that housework."

Once again Mrs Downey queried "Mother" and this time Mary answered, "Yes, that's what the trouble was—you told me that I was supposed to pretend like I was very tired from cleaning house, and besides, I don't like house cleaning anyway."

"And how had the children been acting?" continued Mrs. Downey.

"They had been noisy all day," answered "Mother."

Mrs. Downey then asked the actors to return to their seats and she led the children in a discussion on how their own mother's might act in a similar situation. As would be expected, the majority of the children reported that their mothers tended to act the same way. Tom still maintained that mothers in general, including his own, were cranky all the time, but the total picture was kept in balance by a couple of the girls who maintained that their mothers seldom became cranky about anything.

Ice Cream and Cake. At this point, Mrs. Downey set up the next sociodrama, with Mary continuing in her part as "Mother" but with different pupils to play the part of the "children." The same "Mother" was used so that a change in the "Mother's" reactions might be related to situational factors rather than the personality of a different mother. Different actors were selected for the "children" simply to provide

more pupils with the chance to become actively involved. The "children" received the same whispered instructions that the previous "children" had received: they were hungry and thirsty and they were to ask "Mother" to fix something for them. "Mother's" instructions were quite different this time. She was told that it was a pleasant sunny day; that "Father" was going to barbecue dinner on the outside grill this evening, thus relieving her of any cooking chores; and that the "children" had done a good job of cleaning their room without even being asked.

After a few moments with the blocks, the new "children" interrupted "Mother's" dusting with their request for some refreshments, and this time their reception was quite different.

"Of course you may have something, children; I don't have any cookies for you but there is some cake left and we might even put some ice cream on top."

"Oh, gnodie!" exclaimed one of the "children." "I'd like a big piece please," and they both clapped their hands just like the real thing was forthcoming.

"Well now," began Mrs. Downey. "Things went quite differently this time, didn't they? I wonder why."

Stephanie, who was not too bright, excitedly replied, "I know! The 'mother' wasn't tired this time."

"I suspect that's part of the story, Stephanie, but there's probably some other reason, too," said Mrs. Downey.

"I bet the children have been quieter this time," volunteered Angela.

"Yes, they were quieter this time," affirmed Mrs. Downey. "But don't you think that there would have to be something even better than that to account for 'Mother's' especially good mood?"

Jessica had felt a little uneasy playing with the blocks during her previous acting stint with even an imaginary "Mother" house cleaning, because, at her home, she always helped her mother in some small way. This prompted her to say, "Maybe the children had been helping the 'mother' clean house."

"Is that right, 'Mother'?" asked Mrs. Downey. "Have the 'children' been helping you clean house today?"

"Yes they have," replied Mary. "They straightened up their rooms and I didn't even have to ask them, or nag them,"

"I think we've finally found the most important reason, don't you, children?" asked Mrs. Downey. "How many of you think your mothers would feel good if you volunteered to help with the house cleaning?"

Most of the class answered "yes" by raising their hands and nodding agreement. At this point, Mrs. Downey realized that time was running short and that they would have to move faster if they were to complete the two additional dramatic sketches that she had in mind. She asked

"Mother" to tell the class about her pleasant anticipation of an evening's relief from the main cooking chores. The class discussed this briefly and appeared to gain a bit more insight on the things that affect "Mothers'" moods.

During the second half of the session, Bill and Angela effectively depicted the classical situation wherein "Father" comes home after a hard day at the office only to be greeted by a wife with nagging requests and troubles to be unloaded. This produced a believable little spat and tearful retreat to the bedroom on the part of "Wife." The final skit presented the converse situation with Linda showing how a wife might safely make the same demands on her tired husband after first providing him with a cup of coffee and an opportunity to unburden a few of his troubles.

The lesson was completed with a four- or five-minute summarizing discussion in which the class concluded that moods are easily changed by many things. Some of these things are really very important, whereas others having equally strong effects often seem small and not important at all.

Mrs. Downey set up a fairly sure-fire situation for the class in this example. In this school district, the children were generally familiar with house-cleaning chores and their effect on mother's disposition. The same content could have been covered more quickly in a simple discussion with the children, but the use of the sociodrama probably produced a much higher degree of involvement. The action demanded their attention. The limitation of the player's acting ability in many instances proved advantageous as the children had to use their imagination in an active way to piece the stories together.

II. Just Like Me—Almost

School-age children regardless of their particular stage of development need reassurance that they are "normal," that they are in some way unique and important, and that they have some distinctive qualities. The inherent conflict in these needs begins to disappear as children learn to understand them better. The lesson described here is designed to provide the pupil with a little better understanding of a desirable balance between common and unique qualities:

Concept: People possess many similar personality traits, yet each person is unique.

Pupils: Developed for second-grade boys and girls of average socioeconomic status in an urban setting; generally recommended for the primary grades.

Techniques: Still pictures or overhead transparencies.

The use of still pictures combined with class discussion is but one of several possible ways to handle content bearing on this concept, and within this technique several variations can be used. Study of the specific example presented here should provide ideas for broader applications of the content and techniques involved.

The pictures show children of approximately the same age as the class engaged in a wide variety of activities. Most of the activities are common ones with which the majority of the pupils are familiar. Specific pictures and typical discussion points include:

1. "*Helping set the table.*" How many of you do this at home? Why do you? Why don't you? Do you like to? Why? Why not? Should boys do this chore? Why not?
2. "*Packing for a family vacation.*" Where do you usually go? Do you like it? Why? Why not? Where would you rather go? Does your father have a good time? Does your mother have a good time?
3. "*Playing a game.*" Do you play this game? Do you like it? Why? Do you play it well?
4. "*Caring for a pet.*" Do you have this sort of pet? Are they fun to own? Do you take care of it? What other pets are nice?

The discussion of such activities as these provides the children with the opportunity to discover many things that they share in common with their classmates and to strengthen their sense of security in so doing; however, they also can discover the existence of many individual likes, dislikes, habits, and capabilities along with some logical reasons for these differences. This awareness can help children respect the individual differences they perceive in themselves and in others.

III. Does He Really Feel That Way?

The small child's habit of freely exhibiting his emotions probably constitutes one of his more charming aspects. When he is happy, he is happy, and he lets everyone know about it. His sad or angry moods can be unpleasant, but the adult that manipulates him out of his darkness is quickly rewarded with his smiles and laughter. However, a little maturity soon changes this situation; the older child, or the adult, soon learns not to wear his emotions on his sleeve. Instead, he learns to adopt a variety of façades which often make it difficult for those around him to gain any true indication of his feelings. Although this practice often serves useful ends, it also tends to cut him off from the sympathy and understanding of those who might offer their help. If we are to react in a sensitive and constructive way to those around us, we must learn to look behind these façades and see how people really feel.

<i>Concept:</i>	Emotions are expressed in many different ways.
<i>Pupils:</i>	Developed for fifth-grade boys and girls of lower socio-economic class in an urban setting; generally recommended for grades four through six.
<i>Technique:</i>	Problem story.

In the following example, the teacher utilized his special knowledge of the needs and interests of his pupils in the writing of a problem story (see pp. 129-131) tailored to both the special characteristics of his class and the specific concept he wished to develop. Although his narrative was somewhat amateurish in quality, it was tailored for his situation. Because the story was short, the issues clear, and the reading ability of the pupils low, he simply read the story to the class. Under different conditions, he might have duplicated the story and provided a copy for each pupil.

THE EXAMPLE

"It ought to be simple to develop an interesting story to illustrate this concept," thought Mr. Valke. "If I can just think of a common emotional situation and then describe the reactions of two or three persons, I think the kids will get the idea."

At this point, the complaints of a couple of the local merchants in the area of the school about the conduct of some of the pupils in their stores after school suddenly came to mind. With the basic theme thus provided, the rest of the narrative quickly took shape. Within fifteen or twenty minutes Mr. Valke had the story "roughed out" in a form suitable for presentation.

The next day in class Mr. Valke began the health lesson with a short discussion of "moods" or "feelings."

"Yesterday we learned quite a bit about 'moods' and 'feelings'; can anyone tell me what we decided about their importance?"

"It's just nice to be 'happy' or 'satisfied' most of the time," volunteered Mitzy. "Nobody wants to be angry or sad very often."

"And we can sometimes learn to control our moods a little bit," added John. "So that we can keep from blowing our top or feeling down in the dumps too often."

"That's right, isn't it, children?" confirmed Mr. Valke. "Some moods are much more pleasant to have than others, aren't they? But wasn't there at least one other important thing we learned?"

"I know," said Dick. "They make you do things sometimes."

"Dick has thought of another important reason," said Mr. Valke. "Who can tell us a little more about how moods affect the way we do things?"

After a couple of more exchanges the role of moods as modifiers of behavior was clarified and the review of the previous day's material was completed. Mr. Valke then introduced the main activity of the current lesson.

The Story. "Let's see if we can find out something new about moods and feelings. I'm going to read a story to you that I think you'll enjoy and after I'm through I'm sure there'll be some questions about it. Let's see who can answer them. This story is about three fifth-grade boys who lived in a city something like ours."

Mr. Valke then read the following narrative:

Hank, Bill, and Kev liked to hang around Mr. Richards' drugstore in the afternoon after school. They would sometimes buy a root beer or even a milk shake when they had enough money but the real attraction was the well-stocked magazine rack up near the front of the building. The three boys would read comic books for hours if they could get away with it. Mr. Richards didn't like people reading his magazines without buying them so he would often run them out of the store. But the boys found that if they were quiet, they could get in a lot of reading before they were discovered, especially if Mr. Richards had many prescriptions to fill. This was really starting to bother Mr. Richards; the comic books were generally out of place, sometimes torn up, and lately it seemed that some of them were missing.

Mr. Richards decided to investigate; the next day he slipped out the side door into the alley and walked around to the front of the store just as the boys were coming out. Each of them had a brand new comic book in his hand, one that he hadn't paid for. Mr. Richards had faced this situation before. Because it was near closing time anyway, Mr. Richards decided to lock up his store and take the boys home to their parents and talk things over with them. Hank was the only one that did any talking in the car.

"We were going to pay for them, Mr. Richards, we just got talking and forgot. How can you call that a crime? You shouldn't be taking us home like this. It's practically kidnapping!"

Hank went on and on but Mr. Richards hardly even answered him. Meanwhile Bill started to cry; he didn't make much noise, just a little sob now and then, but he couldn't hide the tears that were streaming down his cheeks. Kev just sat and stared straight ahead and he was very, very quiet.

The three fathers acted differently when they heard Mr. Richards explanation. Hank's father used a big stick that he kept in the garage for such occasions and poor Hank was nursing some big welts as he went to bed that night. Bill's father seemed equally upset but he talked to Bill for an hour or more about honesty, character, and the importance of thinking about one's future. Bill felt badly to start with and he felt much worse after all that. Kev's father, after hearing that Kev had taken a total of ten comic books, simply told him that he was to stay away from the drugstore for the rest of the school year except for one trip per week to turn over his allowance to Mr. Richards. This was to continue until Mr. Richards was paid for his magazines, time, and trouble.

The Discussion. After he had completed the story, Mr. Valke asked the class how they thought the boys felt when they found out that Mr. Richards, the druggist, was going to take them home to their parents. Dick answered this question with the general observation that they were probably scared.

"But one of them wasn't scared," countered John. "One boy was busy trying to talk the druggist out of taking them home."

"I think you mean Hank," said Mr. Valke. He then reviewed what Hank had said and confirmed the fact that "Hank was very talkative."

"But sometimes people talk a lot when they are scared," argued Marv. "I think they were all scared."

The other pupils expressed their agreement with Marv that all the boys in the story were scared, and it became apparent that this was the class consensus. Mr. Valke then asked the class if they thought that the boys showed any other important moods or feelings. After some discussion, the class decided that the boys were sorry about their actions, and at least part of this sorrow was due to shame or disappointment in themselves.

Mr. Valke then switched the discussion to the question of how the fathers felt.

John provided the predictable reply, "They were pretty angry, especially Hank's father who gave him a whipping."

Mr. Valke then moved into the same pattern as in the previous sub-discussion by asking if the other fathers were also angry. This time the pupils could not agree on whether or not Bill and Kev's fathers were very angry. This prompted Mr. Valke to try still another approach.

"Suppose Bill and Kev's fathers became real angry at their boys for some other reason; do you think they would give Bill and Kev whippings?"

This new approach was rewarded with some thoughtful replies that indicated that the pupils had become effectively involved with the problem.

"I don't think those fathers believe in whippings."

"Some grown-ups don't like to let on how they feel."

"My mother tries to act mad at me sometimes when she really isn't."

"My father gets real quiet when he's mad—then I have to watch out!"

Mr. Valke concluded the session with a brief summary in which he called attention to two main points that the class uncovered in the course of the discussion: (1) people don't always show their anger, shame, or other feelings in the same way, and (2) people sometimes try to hide their real feelings for many different reasons.

There are a few interesting points about Mr. Valke's techniques that

can be profitably reviewed at this point. It should be noted that, although he had clearly decided on the concept he wished to present, he did not present this concept directly to the class. Instead he sought to lead the discussion in such a manner that the pupils, both individually and collectively, would discover this concept. The most important learning took place when the pupils were actively reacting to the comments of their classmates and formulating replies in their own minds. This process had considerable value regardless of whether or not they got a chance to express their reactions. The information that Mr. Valke expressed directly, such as his paraphrasing of the concept in the summary, was of secondary importance. It was useful in crystallizing many of the important points of the discussion, but its value was dependent on the learning which preceded it.

This class lesson also illustrated some astute handling of a moral question. Mr. Valke kept the class on the topic of the moods and feelings and seemingly ignored the fact that the characters in the story had committed an act that is generally condemned in our society, but the nature of his narrative and the manner in which he conducted the discussion linked thievery with "shame" and "disappointment." This resulted in a moral "fringe benefit" without distracting from the basic purpose of the lesson.

Much of the success of Mr. Valke's narrative was undoubtedly based on its appeal to some of the baser emotions of the class. It involved theft, fear, tears, and physical punishment. These elements are not pleasant but neither are many emotional situations that one must learn to handle in the process of maturing socially. In a small way and at their own level, Mr. Valke's pupils were attempting to look behind the overt actions of the characters under discussion and react to the real motives and emotions involved.

IV. Great Expectations

"Why do children keep wanting to grow up? If they were smart, they would realize how lucky they are." This is a very common adult reaction to the seemingly incessant striving of children to gain the privileges, responsibilities, and status of adulthood. Although these efforts often seem misguided, they are very real; they are virtually universal among young people and represent normal, healthy phenomena. However, impatience and restiveness with this slow process does at times create problems and frustrations among children and youth at all stages of development from infancy through adolescence. Education can help alleviate these problems by providing the child with a broader perspective of the basic task of growing up.

Concept: Society's expectations of behavior vary according to the age of the individual.

Pupils: Developed for sixth-grade boys and girls of above-

average academic ability and socioeconomic status; also recommended for average to above-average groups of grades seven through nine.

Technique: Group art project.

One of the major difficulties involved in helping children develop this concept is that it requires that they focus their attention on several different points in time simultaneously. Even when dealing with adults, some graphic means of portraying the occurrence of events in time is very helpful; among elementary school children it is practically essential. The technique described in this section involves the use of a mural composed of a series of individual pictures each depicting important instances of independent or dependent behavior of children at different ages. This type of mural is more technically termed a frieze, because the pictures are designed to be viewed in sequential order rather than as one elaborate composition.

The use of an appropriate commercially prepared frieze or mural would be useful but only in a limited sense, because much of the value lies in the actual creation of this visual aid. This type of project provides the opportunity to combine artistic expression with the study of health and thus justifies the allocation of additional class time to the project. This project could be accomplished in four class sessions as follows:

1. Present some general information concerning the privileges and responsibilities associated with various stages of growth. Appropriate selections from assigned readings, a short film or filmstrip, or a newspaper or magazine article are common sources for this sort of material. Invite the class to express opinions on what privileges and responsibilities are proper for their age groups and how their views differ from those of their parents. Any type of discussion in this area is generally very interesting to elementary pupils and should result in good pupil involvement. Lead the class toward a decision to pursue the topic further the following day.

2. Write seven headings across the top of the blackboard entitled (1) Infancy, (2) Toddlerhood, (3) The Primary Grades, (4) The Intermediate Grades, (5) Junior High School, (6) Senior High School, and (7) Adulthood. Assign each pupil to a committee; distribute the academic ability, artistic talent, and leadership ability as equally as possible. Designate a chairman and a recorder for each committee. Ask each committee to compile a list of important things that people in their category normally can and cannot do without outside help. Allot approximately twenty-five minutes to this task. If conditions permit, allow one member of each committee to go to the library to select resource material; provide them with a list of possible selections or arrange for assistance from the librarian to be available during this

time period. At the end of the allotted time, collect the lists and alert the class to the beginning of the art phase of the project during the next day. Ask them to discuss their task with parents, brothers, sisters, and so on, before their next meeting.

3. During the time scheduled for health education, ask the committee to meet and (a) consider any new suggestions, (b) review the total list and select the best example of independent behavior and the best example of dependent behavior. After approximately fifteen minutes, have the class meet as a total group to review the selection of each committee. Place each item on the blackboard as it is reported and approved by the class. The resulting entries might look like this:

<i>Stage</i>	<i>Independence</i>	<i>Dependence</i>
Infant	chooses from among various toys in his playpen	Mother must pick up his toys and put them away
Toddler	uses her own spoon to feed herself	Mother must put the food on her plate
Primary Child (second-grader)	cares for her dolls and other toys	needs a baby-sitter when the parents are away
Intermediate Child (fifth grader)	buys a "coke" with his friends	needs Mother's help when buying clothes
Junior High Student	cares for children as a baby-sitter	must rely on others for auto transportation
Senior High Student	reads and understands about political candidates	cannot go to the polls and vote
Adult	cares for his children when they have a cold	calls for the doctor when the illness is serious

On the same day during the art period, ask each committee to plan and draw in pencil a picture depicting each of the two situations in its category. Generally two children will be available for each picture. If so, one can work on the background and the other on the figures on separate pieces of art paper; the two parts can be cut out and combined later. Help the groups achieve some uniformity in size and style. This is the time to utilize the services of an art coordinator, or consultant if such a person is available. Classes with a good background in art work can attempt realistic scenes and those with lesser skills can do an effective job with a "stick-figure" schematic approach. After the pencil drawings are completed, colors should be selected and approved; then the students can go on to the painting. Generally the paintings must dry overnight before they are assembled or mounted.

4. On the fourth day of the project, have each committee assemble its two drawings. The finished pictures for each stage may then be

attached, by paste or staples, to a long piece of butcher paper for display along a wall of the classroom. If a large bulletin board is available, the pictures may be attached to it. Labels or captions may be kept to a minimum because the entire class should be familiar with the content and meaning of the pictures. Once the art work is completed, the way is clear for a profitable discussion of its meaning and interpretations in greater depth. The mural or frieze may serve to illustrate related ideas or concepts that are studied in succeeding lessons.

The project as described here requires good deal of advance planning to insure its success. It also requires sixth graders with some experience in committee work and a reasonably good background in art work. However, where these conditions prevail, a project such as this can result in a highly meaningful experience. Its usefulness as a means of developing the stated concept will vary directly with the intensity of the pupils' efforts to examine and evaluate typical behavior for each age category. The suggested schedule calling for the completion of the mural in four sessions is a rigorous one; individual teachers may wish to set a more leisurely pace if additional time is available.

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9

Mental Health: Secondary Level

The emotional characteristics and interpersonal needs of secondary school youths provide implications both for the general conduct of the total school program and the specific task of educating adolescents about mental health. The typical secondary school seeks to meet the emotional needs of students in many ways. By providing a diverse and varied curriculum with individually tailored programs, it seeks to provide a secure academic niche for each boy or girl. By staffing the school with teachers with adequate professional training in their content specialities, in the characteristics of adolescents, and in the mechanics of teaching, many potential cases of school maladjustment may be avoided. By making available guidance counselors who can provide help both with academic problems and personal difficulties requiring supportive therapy, many serious problems can be corrected in their early stages. By presenting the student with an attractive physical plant, the school can encourage the student to take pride in his school and realize the importance the community attaches to his need for a good education. In short, anything that the secondary school does to provide a sounder total program contributes either directly or indirectly to the mental health of the student.

In recent years there has been a growing awareness on the part of school-board members, administrators, and teachers of the influence of such factors

as the curriculum, teacher-student relationships, guidance services, and even school architecture on the mental health of the student. However, as at the elementary level, the student's need to learn basic principles and concepts related to mental health has not been widely recognized. Health educators generally believe that the educational phase of the school health program can make a significant contribution to the student's mental health. This contribution is not as dramatic as that provided by school psychiatrists and community mental health clinics, because classroom education serves a preventive and promotional rather than a treatment function in mental health. Although certainly less visible, the educators' efforts are of great importance in terms of their long-range effects.

An effective contribution depends on a sound program, and, as in any other area of health education, the growth and developmental characteristics of children provide a logical starting point for program planning. Those characteristics that seem to have particular application to mental health will be discussed in the following section.

The Fundamental Task of Adolescence

"Who am I?" "Where am I going?" "How do I get there?" "Will I ever get there?" As the individual moves out of the typical gang stage of the upper elementary school years and through the stormy years of adolescence, these questions become increasingly important. Much of the adolescent's behavior is accounted for by his struggle to find answers for these questions or relief from the tensions they produce. The adolescent is searching for his own personal identity and independence; he may not be conscious of this search in a manner that enables him to express this need in any articulate way, but it will appear in many other forms. One of these is found in the changing role of the peer group.

Personal Identity The typical gang of the elementary school child serves mainly to provide emotional support and companionship for its members. The fifth-grader, for instance, is generally content merely to belong, to be accepted. Belonging and being accepted are also vitally important to the adolescent in meeting his immediate needs; however, he also looks to the future. The temporary nature of the gang now becomes increasingly apparent to him. As he becomes more aware of the nature of adult society, he wishes to develop a more individualized role; he must make his mark, find his place. These feelings tend to produce a self-awareness or self-consciousness greater than that of either the small child or the adult.¹ The fifth-grader can decide that he is going to be an astronaut and beat down all criticisms of his decision; the ninth-grader, however, soon realizes that if he does not figure out some way to handle first-year algebra many professions may be

¹Bernice R. Moss, Warren H. Southworth, and John L. Reichert (eds.), *Health Education* (Washington, D. C. National Education Association, 1961), p. 65.

closed to him. The fifth-grader may decide that he never wants to get married or that he may someday marry a movie star; the ninth-grader fears that if he does not find something to cure his acne, he may never get a date.

In his efforts to move toward his version of competent adult status, the adolescent is seeking independence, on the one hand, and accurate guidance, on the other. He now uses his age mates as a reflective device; he studies their reactions closely for clues to the true nature of his own emerging personality. He uses adults in the same way, only the process is more complicated. He must gain information from this segment of society without becoming subservient to it. This ambivalent attitude toward adults is most apparent in the adolescent's typical view of his parents, which is aptly described by Stone and Church as one in which parents who intervene in the child's life are "snoopy and domineering" whereas those who do not are "neglectful and uncaring."² It is not surprising that parents and teachers alike find the secondary school youth a challenging individual with whom to deal. The young person's problems with the basically sexual aspects of his behavior will be discussed in later chapters. The sex drive provides many general implications for mental health.

A Mature Sex Role. The development of the sex drive in its mature or genital form serves as a constant reminder of the adolescent's growth toward adult status and responsibilities. Its arrival tends to close the doors of childhood and add a sense of urgency to the task of developing a relatively mature masculine or feminine role. A closely related problem of the teen-ager is found in the simple need to master the sex drive and channel it into constructive pursuits. Regardless of the views of the adolescent or his parents toward sexual behavior, few adolescents release more than a small portion of their sexual tension through sexual intercourse, and many, of course, release none at all in this way. Although medical and psychiatric authorities have pointed out the fallacies inherent in folklore concerning masturbation, this practice still produces guilt feelings among those who use this form of physical release.

Havighurst³ and others who accept the concept of neutralization or sublimation of sexual energy feel that our society requires the adolescent to learn to channel the sex drive into such things as academic, vocational, or athletic pursuits. Another important outlet lies in participation in heterosexual activities such as informal discussions, recreational games, and social dancing. When properly managed, these things can reduce rather than increase sexual tensions.

Although mastery of the physiological component of the sex drive

²L. Joseph Stone and Joseph Church, *Childhood and Adolescence*, 2nd ed. (New York: Random House, 1968), p. 447

³Robert J. Havighurst, *Developmental Task and Education*, 2nd ed. (New York: Longmans, Green, 1952)

constitutes perhaps the most dramatic need of the adolescent, the development of other aspects of the mature sex role is also formidable. The teenager seeks to develop those qualities of manliness or womanliness that he or she considers ideal in the adult. The fact that some of the attempts to assume adult mannerisms are painful, clumsy, and inept serves to remind the *teen-ager of how long and difficult the path to adulthood is*. Many adolescents seek to develop such attributes as courage, forthrightness, decisiveness, integrity, and a social consciousness in a short span of time. And, of course, they want to incorporate all the mannerisms and little marks of sophistication that they associate with adulthood. It is little wonder that they often tire of the struggle and find relief in periodic binges of childish behavior.

Individual Variations Although it is not difficult to identify the basic pattern of emotional development in the adolescent, it is virtually impossible to discuss the many variations displayed by individual children as they grapple with the complex problems involved. Many junior high school students appear to prefer the role of the competent child to that of the struggle of the incompetent adult-to-be; this temporarily simplifies things for both the child and the adult dealing with him but merely delays rather than solves any problems. Some adolescents exhibit ambivalence or problem-centered behavior throughout their secondary school careers; others who seemingly show little distress may be adjusting smoothly or may be covering up serious conflicts by directing them inward in a pattern likely to produce psychosomatic ailments or long-term personality scars. Regardless of the apparent presence or absence of maladaptive behavior, or the student's individual style of handling the problems of this stage, health educators generally feel that these tasks can be made easier for the student if he is provided with an opportunity to develop a basic understanding of the forces that influence his behavior during this period.

INSTRUCTIONAL APPROACH

One principle of health education that should be re-emphasized when content and teaching techniques are selected is that health education should deal primarily with *health* rather than *disease*. A classroom unit on mental health will do little for an emotionally disturbed adolescent; it is too late to reach him with a program that is essentially preventive. His immediate need is for therapy, not instruction. However, education in this area can be of benefit to the average student. A little insight will help smooth out the rough spots and perhaps prevent overreactions to minor problems. More importantly, the student may be led away from unconstructive patterns of behavior that might lead to mental illness. *One way that this can be accomplished is by preparing the student for problems before they are upon him*. Prepare the ninth-grader for his coming entrance into high school society; prepare the high school senior for the adjustment problems of college life, or for an eight-

hour day of work. Discussion and anticipation of future problems will exert an admittedly small but important influence on the individual's mental health. Such preparation is far better than walking blindly into situations and repeating the mistakes of the past.

Suggested Concepts

Curriculum workers and content specialists probably vary more in their recommendations for priority concepts in mental health than in any other topical area. For this reason it is particularly important to subject any list such as the following to critical review before incorporating its material into any lesson plan or curriculum guide. These concepts were developed after a review of several sources;⁴ note that some represent a more mature extension of those suggested for the elementary level, whereas others are unique to the secondary level. As before, these are presented in somewhat technical language for the teacher's benefit; their effective presentation requires translation into language and situations meaningful to the particular students involved.

1. *Human behavior is determined by mental, physical, and social factors; it is complex and characterized by adaptability.*⁵ Thoughts, feelings, and actions result from a complex interaction of natural forces. Although behavior is always directed toward some form of need satisfaction, it may be either adaptive or maladaptive in its effects.

2. *An individual's personality includes many internalized concepts, values, and modes of expression which produce a certain degree of consistency in his behavior.* A wide variety of structured and unstructured learning experiences account for a large portion of one's personality structure. Although personality is constantly developing or undergoing modifications, changes tend to take place slowly.

3. *Both individual and group values are important to a sound personality structure.* Some values are common to the large majority of one's society. Others are unique to certain segments, such as ethnic groups or individual families, and still others may be unique to the individual. Personal values should be appropriate to one's situation and generally should not bring one into serious conflict with society.

4. *Regardless of the influence of external forces, society generally holds the individual responsible for the behavior he displays.* As one matures, he is expected to show increasing degrees of control, or self-discipline; the

⁴Most helpful were *Health Concepts Guides for Health Instruction* (Washington, O C.: National Education Association, 1967), "Mental Health in the Classroom" special issue of *The Journal of School Health*, Vol. XXXVIII, No. 5a, May, 1968; and *School Health Education Study, Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press, 1967).

⁵*Health Concepts: Guides for Health Instruction* (Washington, O C.: National Education Association, 1967), p. 42.

development of this quality generally serves the interests of both the individual and society.

5. *"Self-acceptance is fundamental to sound mental health."*⁶ Self-acceptance and self-respect are based upon a realistic appraisal of one's values, abilities, and other important attributes. Although others can help in this process, these qualities must ultimately come from within.

6. *A basic understanding of the dynamics of human behavior facilitates constructive reactions to interpersonal conflicts and other similar problems.* Those who direct their attention to the underlying causes rather than the external manifestations of undesirable behavior are generally more effective in producing desirable modifications.

7. *Mental illness appears to represent maladaptive reactions to emotional or organic stress.* Although cases of mental illness may be grouped into various categories, each case is unique in terms of its apparent determinants, specific symptoms, and indicated therapy.

8. *Appropriate therapy generally results in the elimination or marked reduction of the symptoms and disabilities associated with mental illness.* Effective treatment measures exist for most cases of mental illness, the effectiveness of these measures is greatly enhanced by prompt and thorough application.

Suggested Techniques

Interest in mental health topics tends to increase as students progress to higher grade levels.⁷ However, it will be found that their interest will usually be restricted to practical situations involving interpersonal relationships or individual problems as opposed to psychologic theory. This is particularly true at the junior high level. There is little that can be done with the facts and principles of personality development or mental illness until they are translated into meaningful examples or illustrations. Once this is accomplished, a wide variety of teaching approaches can be used. Techniques that involve a high degree of student involvement, such as role playing and problem solving, still provide the most impact and should be emphasized, particularly at the junior high level. However, these can be interspersed with such traditional devices as library assignments and class discussions. These provide the advantage of covering more content per unit of time, thus broadening the scope of the unit.

PRACTICAL APPLICATIONS: SECONDARY LEVEL

This section includes examples of how instruction leading to the development of specific mental health concepts might be handled. Four types of classroom situations are used as examples for the secondary level.

⁶Ibid., p. 43

⁷Denver Board of Education, *Health Interests of Children* (Denver, Col.: Denver Public Schools, 1954)

I. Everybody's Doing It

Parents and teachers alike have often lamented over the seemingly irresistible drive of adolescents to gain status with their peers through conformity to all manner of popular, yet often ill-advised, behavior patterns. These group norms, fads, or whatever you wish to call them take their most obvious forms in new fashions of dress, expressions of speech, and tastes in music. Behavior in these categories is generally harmless or merely irritating; however, when popular innovations in dating behavior, use of stimulants and depressants, use of automobiles, and vandalism or quasi-legal activities begin to take radical directions, then the consequences become more than merely irritating. The efforts of adults to intervene in these situations are complicated by the fact that a reasonable degree of conformity to peer group norms is essential to normal personality development in the young person. The answer does not lie in merely encouraging adolescents to resist peer pressure but in teaching them to evaluate the type of behavior that conformity will involve.

Concept: Both individual and group values are important to a sound personality structure.

Students: Developed for ninth-grade girls with average academic ability; also recommended for girls or co-ed groups of grades eight and ten.

Technique: Buzz session.

The buzz session, as described in Chapter 7 (pp. 128-129), involves the placing of students in small groups, generally of three to six, for brief but intensive discussions. Probably the most important single factor contributing to the success of the buzz session is the selection of an appropriate topic. If students are to deal with the topic in small discussion groups not directly supervised by the teacher, they must have something interesting to discuss.

In the following example a ninth-grade teacher uses the buzz session to help her class of girls examine fads as a means of learning about an immediate concern while also developing a more abstract concept related to individual versus group values.

THE EXAMPLE

Mrs. Reynolds was not too impressed with the concept she found underlined in the left-hand column of her curriculum guide. "I can't picture my ninth-graders getting excited over a philosophical comparison of individual versus group values," she thought to herself. However, one of the suggested learning opportunities caught her eye. It stated, "Have students develop guidelines for the evaluation of fads; use buzz sessions or a more permanent type of committee organization

for this task." "That's more like it!" she thought. "Those girls of mine would go for something like that, and, if there is anything they need, it's to learn how to use a little common sense in thinking about these goofy fads!"

Mrs. Reynolds had always been aware of the way the ninth-grade girls would follow the latest "in" thing popular with the high school crowd. Some of the more mature and popular ninth-grade girls were dating senior high school boys, and these girls, who were envied by many of the other students, served as a ready means of communication between junior high and senior high society. All the fads, of course, were not inspired by high school fashions. The junior high schoolers were fully capable of originating their own ideas, but some of the most troublesome practices resulted from the tendency of the younger groups to adopt a fad originated by the older students and exaggerate it or in other ways apply it with poor judgment.

Generating Interest. The next day in class Mrs. Reynolds began by reviewing with her students a colorfully illustrated article on teen-age clothing fashions in different sections of the United States. This article was found in a popular magazine devoted to teen-age life, and Mrs. Reynolds noticed that in addition to fashions in clothing it also made frequent reference to such items as "kookie" pins, pierced earrings, bleached hair, and so forth. Mrs. Reynolds let individual members of the class express their opinion on a few of the more interesting aspects of the article in a general way for five or six minutes to let them get involved and build enthusiasm for the topic. It was not hard to get them discussing clothing fashions. They were ready to discuss that topic all period, but that was not what Mrs. Reynolds had in mind. One of the girls had just finished clarifying her previous comments on the type of outfits she felt went well with chain link belts when Mrs. Reynolds said "I doubt whether we could get the whole class to agree on the proper use of chain belts if we talked about it all period. Let's talk about fads in things other than clothing. Who can name some?"

Several hands went up and Mrs. Reynolds recognized each girl in turn. Before the class had exhausted its ideas, several good examples of fads had been presented. They mentioned two or three fad diets, the recent revival of "knock, knock" jokes, new types of dances, ear piercing, and a number of others.

"You've mentioned plenty of interesting examples, now can you tell us if these fads serve any useful purpose," asked Mrs. Reynolds.

Jeannie offered the first comment. "I don't think they serve any purpose, but who cares, they're fun."

"But fun is a purpose," countered Marcia. "What would life be worth without fun?"

"That's quite profound Marcia; now that you have given us your

philosophy, let's get specific. Why *are* fads fun," asked Mrs. Reynolds in a somewhat teasing fashion. She knew that Marcia was bright and irrepressible and a person who responded well to a little pressure.

"Well,—they're something new and different, they keep you from getting bored," said Marcia.

"That sounds reasonable, life does get monotonous at times," replied Mrs. Reynolds. "Now can someone else think of any other purposes?"

During the next two or three minutes a number of other purposes were mentioned, but only two of these had direct relevance to mental health, namely, that fads make one feel like "one of the gang" and that some fads involve knowledge or physical skills that may be useful.

Mrs. Reynolds summarized this brief subdiscussion and then issued instructions for the main activity of the period.

Launching the Groups. "Those are two very worthwhile purposes. I think that you are beginning to discover some of the more important characteristics of these things we call fads. Now I want to give you a chance to discuss this topic more thoroughly in small groups."

"Here's how we'll do it, girls," directed Mrs. Reynolds. "I would like these instructions followed closely. First, are all the recorders here today? Raise your hands, please."

Noting that all were present Mrs. Reynolds proceeded. "I would like the recorders to copy this down. The others should be listening so that you'll be ready to come up with some good ideas as soon as your group is assembled. Develop five to ten good rules to help one decide whether to follow a certain fad or to avoid it."

Mrs. Reynolds repeated the statement describing the task one more time to insure that the recorders had an opportunity to copy it accurately. She then emphasized that she wanted each group to turn in a good list of guidelines at the end of the discussion period. She designated six areas of the room for the group meetings, asked if anyone had forgotten the group to which they were assigned, and told the students to move to their areas and begin immediately. There was a brief commotion as the students moved to their places, but as the six tight little circles formed, the noise moderated to a tolerable level that permitted easy communication between group members.

Trouble-shooting. Mrs. Reynolds directed her first supportive efforts toward those who seemed to be slow at getting organized and beginning the task. This involved prodding a couple of the girls to move their chairs into their circles and getting back to the topic one group that was discussing a pair of steadies that the vice-principal had chastized for displaying too much affection in the hallway. "Come on, girls," she chided. "You'll have all noon hour to talk about that but you've only nine minutes left to finish this assignment, so get going!" With these

minor disturbances taken care of, Mrs. Reynolds proceeded to assist individual groups dealing with their discussion task. She circulated around the room answering brief questions to clarify the assignment. Most of these dealt with superficial points that could be handled quickly; however, she found the members of one group arguing vociferously over the basic nature of the guidelines. She pulled a chair into the circle, redefined the assignment, and served as discussion leader for a few exchanges as a means of getting the group moving in the right direction.

By this time some of the faster-moving groups had several guidelines on their lists. Mrs. Reynolds reviewed these briefly and made constructive criticisms that stimulated further efforts toward improvement. One group had included only negative characteristics without listing any positive reasons to try a fad; another had a twelve-item list with many duplications. These groups were busy with their revisions and one or two of the other groups were just beginning to make progress at the end of the scheduled ten minutes.

"This is the most interest this bunch has shown in anything all year," thought Mrs. Reynolds. "They could put another few minutes to good use." She called for their attention and asked, "How many groups need more time?" After receiving the expected answer from all of them, she said, "Okay, let's take three more minutes, but hurry and get finished."

During this stage of the activity, Mrs. Reynolds watched the groups closely for signs of waning interest and used this factor, rather than her watch, as the main key to her decision to terminate the small-group activity. When the students returned to their regular seats, they proceeded to a productive summarizing discussion for the final ten minutes of the period.

The teacher in this situation was able to lead a group of volatile ninth-grade girls into an activity that permitted considerable freedom of expression, yet channeled student behavior in useful directions. This was accomplished by (1) selecting a topic with natural appeal to the class, (2) introducing it properly, and (3) setting up a learning activity with a firm but flexible structure.

The activities following this small-group discussion could take different forms depending on particular needs. If there was a need to move on to other topics, the highlights of the buzz groups could be reported and discussed in the last ten or fifteen minutes of the period, as just described. This is the simplest culminating activity and probably the one most appropriate to the average situation. If there appeared to be a need to spend more time on the buzz topic, the following class period could be devoted to the development of a composite list of guidelines representing a pooling of the best ideas of the individual groups. The examination and selection of the best guidelines

through group discussion and consensus could lead the participants to a significant degree of individual commitment.

A more elaborate follow-up would be to use the interest so generated as a lead-in to a full-scale problem-solving activity. This would involve setting up a relatively permanent committee structure to examine fads more deeply. This could logically involve the class in library research into the psychological and sociological bases of fads, a survey of student opinion and participation, and interviews with school personnel. This would result in recommendations based on carefully gathered information and the learning involved would obviously extend beyond the specific topic of investigation.

II. Famous Personalities

The term *personality* is an exceedingly difficult one to define. As a health topic, it incorporates breadth, abstractness, and importance in a challenging combination. One of the more practical approaches is to regard personality as the totality of one's behavior. Although this view certainly does little to narrow the topic, it does provide the opportunity to deal with something concrete. We observe what people do in various situations, and when behavior patterns emerge we start applying labels such as *dependence*, *aggressiveness*, or *submissiveness*. Within such behavior patterns we tentatively identify normal ranges of variations and undesirable extremes. We find that certain of these characteristics affect one's chances for success in a specific occupation or affect the prospects for a successful married life with a certain person. The young person's behavior and eventually his personality is strongly affected by his identification with persons he admires or respects. Adolescents need to become aware of this process, gain some understanding of how it takes place, and develop the ability to exert some degree of control over the direction it takes.

- Concept:* An individual's personality includes many internalized facts, impressions, values, and modes of expression which produce a certain degree of consistency in his behavior.
- Students:* Developed for eighth-grade boys and girls with average academic ability and socioeconomic status; generally recommended for grades 7 through 12.
- Technique:* Symposium.

When dealing with a topic such as personality, where value judgments as well as simple knowledge acquisition are involved, it is wise to use teaching techniques that allow direct student-to-student discussion. The symposium (see pp. 126-128) accomplishes this while still providing a tight structure for the class's activity. This technique typi-

cally involves three to five students who each report briefly to the class on a particular phase of a topic. These individual topic reports are then followed by a general class discussion to enlarge on and clarify the main points presented in the discussion. Several topics in the area of mental health lend themselves well to this technique and the possible variations are virtually unlimited. One specific example is described in the following steps:

1. Recruit a student committee to report on a number of famous persons with whom the class as a whole is familiar. Have some suggestions ready but allow the committee reasonable freedom in choosing persons to report upon. Guide the group away from overemphasis on one type of person and toward a reasonable variety. Generally it would not be well to have reports on five pop singers unless the choice there appeared to be due to considerable variation in their basic traits. A more promising group might include a political leader, a professional athlete, an industrial leader, and an entertainer of some sort. The specific categories and persons selected would naturally vary greatly according to the interests of specific groups of students.

2. Provide the committee with suggestions concerning possible sources of information for their reports. In the case at hand, feature stories in various popular magazines would be promising. Biographies or, better yet, books consisting of several short biographical sketches are common sources. Help the committee divide the reporting responsibilities. The simplest scheme would call for each student to report on one famous person; however, some groups might prefer to use a different type of organization. One alternative would be to have one reporter describe the childhood period, another the adolescent years, another the adult life, and so on, of all the persons being studied.

3. Ask the student reporters to concentrate on events and aspects that provide clues to basic character or personality. This often calls for emphasis on behavior in situations not directly associated with public life. What sort of family life does the person maintain? How does he relate to his close personal friends? What form of recreational activities does he choose?

4. Although the nature of the follow-up discussion will naturally depend on the type of information presented in the individual reports, the following points generally merit attention:

- a. *Personality traits.* What traits seem most dominant within each personality? What traits seem to be real as opposed to those that appear to be artificial? What effects do specific traits have on the person's profession? his private life? What traits are held in common by the personalities studied? What traits are obviously missing in the personalities studied?

- b. *Value systems.* What things in life do the individuals value most—fame, power, achievement, family, religion? Do they seem to have long-term goals? How well defined are their goals?
- c. *Talent and ability.* What specific talents or abilities are most responsible for the success of the persons reported upon? How did these seem to be acquired? Do any specific talents seem common to successful people in general?
- d. *Major events.* What events seem to be of major importance in regard to personality formation, personal happiness, professional success? Were these events planned or did they happen by chance?
- e. *Present and future prospects.* Which persons appear to be gaining the most satisfaction from life? Which ones appear to adjust well to disappointments? Which ones appear to be headed toward life-long satisfaction?

Time will not normally permit all these questions to be discussed in one class session, and other questions will arise spontaneously; however, these are the kinds of directions that a meaningful discussion might take. Eighth-graders will generally not be interested in exploring subtle details and ramifications; but they will be able to see some valid generalizations. If this is accomplished, they will become more aware of the direction in which their own personalities seem to be developing, and the groundwork will be established from a more sophisticated study of personality in later grade levels.

III. Swing High, Swing Low

How can we bridge the gap between the abstract material which is often provided in standard health texts and the concrete life problems experienced by our students? This is always a problem with health topics but it can be much more acute when dealing with mental health content. In this example, we see how a teacher translated a rather complex concept into terms that had meaning for students of an urban vocational high school. He accomplished this by finding practical application for the scientific facts and principles related to the topic at hand. Few of the students developed much enthusiasm over the relatively technical discussion of human emotions presented in their textbook; however, when the teacher showed them how to study emotions in a realistic way, they became aware of the major factors that affect this aspect of mental health.

- Concept:* A basic understanding of the dynamics of human behavior facilitates constructive reactions to interpersonal conflicts and other similar problems.
- Students:* Illustrated here with eleventh-grade boys, with average

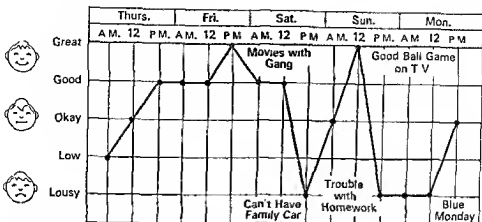


Figure 9-1 Mood and emotion chart (Adapted with permission from material provided by Robert E. Kime, University of Oregon)

to below average academic ability, generally recommended for grades 10 through 12.

Technique: Self-appraisal technique involving a recording of personal mood changes.

Mood and emotion charting was originally developed by Robert E. Kime.⁹ It is a procedure whereby each student records his general mood or feeling tone three times a day for a specified period of perhaps five to seven days. This chore is facilitated by the use of specially prepared charts (see Figure 9-1). Mood and emotion charting can be used effectively with most secondary school students regardless of grade level or general academic ability. Because of the graphic record it provides, the nebulous characteristics of moods and feelings are made much easier to deal with in the classroom. There is seldom any problem involved in drawing students into meaningful discussions of the information contained in a completed set of charts. The teacher's challenge lies in the task of motivating the student sufficiently to ensure his reasonable diligence in maintaining the charts. In our example, this challenge was met through use of a combination of positive encouragement, grade pressure, and persistent reminders.

THE EXAMPLE

Mr. Cohen had given his new group of students their first written quiz of the year on a chapter in the mental health section of their text.

"Boy! What a bunch of characters," he thought as he reviewed their scores. "I thought that this year's eleventh-graders were sharper than usual, but it sure doesn't show in this quiz. None of my sections have

⁹Robert E. Kime, "Mood and Emotion Charting," *The Journal of School Health*, Vol. XXXV, No. 3, March, 1965, p. 138

doe well. Those questioos weren't that hard; I wonder if the 'powers-that-be' have finally thrown reading completely out of the elementary school curriculum."

The thing that puzzled Mr. Cohen was the inconsisteocy of the poor scores with the reasonably good performance of his studeots during class discussion. On the first day of the unit on mental health, he had discussed a few spectacular newspaper clippings concerning mental health themes with his students. Although many of the comments reflected common misconceptions and biases, there were also a seemingly large number of thoughtful cootributions. What Mr. Cohen did not realize was that, as a young and creative teacher, his techniques of discussion leadership were improving greatly from year to year. This factor, together with improved rapport and better classroom discipline, had enabled him to draw more out of his students. But although they responded better verbally, they were the same type of "low-achievers" that he had dealt with in previous years.

As a means of handliog mental health concepts in a more concrete fashioo, he decided to try "Mood and Emotion" charting. Mr. Cohen modified the standard five-point scale slightly to make the terminology more uoderstandable to his type of students. He designated the five levels as "lousy," "low," "Okay," "good," and "great." He had prepared a ditto master of this modification with the chart extending side-ways across the page. He had to cut an inch off the bottom of his ditto master so that it would fit in his portable typewriter at home; however, the remaining 8½ by 10 inches left sufficient space to prepare a chart with plenty of space to add comments. He could have simply drawn the chart with a ruler and printed in the letters but he elected to use the typewriter.

Poor Scores. As Mr. Cohen began the next weekly cycle of classes, he departed from his usual practice of returning and discussing the quizzes at the end of the class hour. This time he returned them at the beginning of class. He was firm and businesslike but not completely unsympathetic as he discussed the generally poor results with his first class. Some of the boys could not have cared less about a poor quiz score, but most were concerned. They had formed an attitude toward Mr. Cohen and his health class that was tentatively positive. He seemed to make things interesting and tried to give them a chance to do well in his course.

"Settle down, fellows," directed Mr. Cohen. "There's no sense crying about your scores. They're already in the book. Let's see what you can do on the next assignment."

With this he handed a supply of the charts he had prepared to the student who had the regular responsibility of distributing materials to the class. "Here, Bill, I want you and your assistant to distribute one

of these to each member of the class." Mr. Cohen found that discussion of quizzes and tests generally left his classes a bit unsettled, so he wanted to get their attention focused on the next learning task. A slight murmur went around the room as each student received a blank chart.

Good Salesmanship. "Listen carefully, please. This chart is easy to work with once you get the directions straight. I really feel that most of you will do well once you find out what to do. You've been reading—that is, at least some of you have been reading—about things that affect people in general. This week we're going to forget about the textbook and study about *you* and the things that affect how *you* feel. And this chart can help you do it."

Following this introduction he went on to explain clearly and simply how to make entries in the chart. He asked them to print a two- or three-word explanation each time they marked the "great" or "lousy" level. By the time Mr. Cohen finished, the class was feeling fairly confident about the assignment. They thought they could tell when they felt "low" "okay," "great," or whatever, and it did not seem too difficult to print a brief comment occasionally. But Mr. Cohen knew it was not going to be that simple.

"We could really have an interesting discussion if you fellows can remember to keep your charts up to date. I'm looking forward to putting some good grades on your papers next week. Now how are you going to handle this job? It's not going to be easy."

Mr. Cohen was aware of good tips about remembering things, but he wanted to hear them come from the group. Most of those students that ate breakfast decided to leave their charts on or near the table where the family ate its meals. Many of the "breakfast skippers" planned to keep their charts near the front door. A few highly enthusiastic students expressed their intention to carry their charts with them throughout the day, but most thought it would be better to make a "mental note" of their noontime mood and record it in the evening. Mr. Cohen was dubious about the accuracy of such entries but recognized the practicality of this scheme.

"If many of these guys try to carry these charts throughout the day, they'll either lose them or give them a ride through the wash in their shirt pockets," Mr. Cohen thought to himself. A final procedure the class agreed to was to remind each other about their mood charts when they met during the week.

Satisfying Results. During the seven-day period from one health class to another, Mr. Cohen had the same boys twice for physical education. During each "gym" class, he again reminded the boys of their mood chart assignment. He also pressured his students on the assignment as he met them informally before school, in home room, and at any other opportunity. As a result of this campaign, about three

fourths of the class produced completed charts as he opened class a week later. Mr. Cohen reminded them again to make sure their names were on their charts and asked Bill and Rich to collect the papers. As the students passed their charts sideways toward the center aisle, Mr. Cohen watched them closely. "All right! Don't get snoopy! If someone had a great time on his Friday night date, it's his own business," directed Mr. Cohen with mock sternness. He was serious when he nabbed Ralph in the back row trying hastily to fill in the last two days of his chart just before turning it in. "Forget it, Ralph. If you want credit for this assignment, pick up a new chart after class and try again next week."

Mr. Cohen returned to the front of the room and picked up the stack of completed charts that Bill had assembled and placed dutifully on his teacher's desk. The class settled down as they saw Mr. Cohen sit on his desk and leaf through the charts with apparent interest. He ignored a whispered comment from the back row concerning who was "snoopy." The class laughed as he remarked, "Boy! Some of you fellows really live a rich emotional life. It looks like many of you spend a pretty busy week!"

Now that he had the interest of the class focused, he said, "You know what I think? I think that this stack of charts might provide a good opportunity for two or three of you to make an interesting semester report. After I grade these, I'm going to remove the names and find a small group that would like to review these and report to the class next week. Now, do I have any volunteers?"

As a result of their interest and their knowledge that Mr. Cohen routinely required one written or oral report from each student each term, six hands went up. Mr. Cohen selected George, Bill, and Greg. the three boys he thought would do the best job, he made George responsible for picking up the charts the next morning before classes began. He then asked all three of them to list the following items in their notebooks as things to include in their report:

1. The average number of "great" entries per chart and the three most commonly listed causes for this mood.
2. The average number of "lousy" entries per chart and the three most commonly listed causes for this mood.
3. The most common day and time for one to feel "great," and the most common day and time to feel "lousy."
4. The most common mood listed for the morning, for noon, for evening; the most commonly listed mood regardless of time.
5. Any other commonly occurring pattern of interest.

After directions were given and recorded, Mr. Cohen asked the newly formed committee to meet with him briefly after class so that he

could help them set up a meeting time some time during the week for tabulating the charts and preparing the report. With the reports of this class thus set up for the following week, he proceeded to introduce the film he was showing for the day's regular lesson.

In this example we see a teacher who is apparently accomplishing a lot while teaching under circumstances that are far from ideal. His teaching duties are divided between health and physical education. He meets his health classes only one day per week, and his students are generally low in academic skills. Despite these handicaps he appears to have a series of interesting reports organized for his next series of weekly classes. He has three of his top students working with very concrete and meaningful material; they have specific instructions concerning the basic structure of their report, yet they have considerable leeway to add items of interest. It seems quite possible that the students hearing these reports may have the opportunity to acquire a good deal of practical and useful information concerning the dynamics of moods and emotions.

IV. To Skin a Cat

In various situations we may observe people putting in an honest day's work, daydreaming about impractical desires, writing a check to a charitable institution, or shooting heroin into their veins. If these items of behavior have anything in common, it is the tension-reduction function that they serve. Psychologists tell us that most of our behavior is oriented toward satisfying needs and thus reducing tension. We accomplish this by direct and indirect means. Sometimes we choose our behavior consciously; on other occasions we seem to react automatically, perhaps unconsciously. But regardless of the general category of our response, the over-all effects on our living satisfaction vary tremendously. In simpler terms, there are better and poorer ways of adjusting to stress, and although it is not possible or even desirable to make all our choices logically or scientifically, a basic understanding of the adjustment process enhances the chances for favorable reactions to emotional stress.

Concept: Human behavior is determined by mental, physical, and social factors; it is complex and characterized by adaptability.⁹

Students: Developed for twelfth-grade, coed classes with average to above-average academic ability; also recommended for similar groups in grades 10 and 11.

Technique: General class discussion.

⁹ *Health Concepts: Guides for Health Instruction* (Washington, D.C.: National Educational Association, 1967), p. 42.

The content that we attempt to teach during a unit on mental health is largely concerned with interpersonal relationships. The individual who can relate well to the significant persons in his life and avoid undue conflict with society's norms for performance and conduct should be well on his way to a high level of mental health. Although much information concerning these formidable tasks can be acquired through the printed word, the expression, application, and manipulation of the ideas involved through lively discussion adds greatly to their meaningfulness and retention. The following suggestions show one possible way to achieve this.

1. In the class sessions preceding the planned discussion, be sure that the students have had a chance to acquire some solid information on the adjustment process from the textbook, films, resource speakers, or ideally, a combination of sources. Generally restrict class discussion during this period to brief exchanges for purposes of stimulating interest or clarifying specific terms or concepts.

2. Review with the class the concept of needs and need satisfaction as a means of initiating the discussion. Whether needs are biological, such as eating, or acquired, such as social status, they may become active under certain conditions and produce a "drive state," which in turn motivates some sort of behavior. A simple diagram may be used to illustrate this idea.



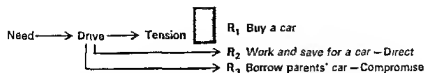
Various high school textbooks and teacher reference sources may use different terminology or a more elaborate explanation, so the details may vary according to these factors. Ask the class to provide some common examples. Typical responses are the following:

- A man gets hungry and eats.
- A boy wants money and takes a part-time job.
- A girl wants dates and diets to lose weight.

3. Present, or draw from the class, an example of a situation wherein a need cannot be immediately satisfied. Example: A sixteen-year-old boy had just acquired his driver's license and wants very much to drive an automobile; because the money for a car is not immediately available, he will have to adopt some long-term or indirect means of satisfying this need. The original diagram can be modified to illustrate this situation. It might look something like this:



4. From this point on the discussion consists basically of proposing, classifying, and evaluating alternative responses. One common suggestion is to "get a job and save money for an auto purchase." As this is proposed, it can be added to the diagram as illustrated, and its practical implications discussed. Another frequently offered alternative is that of borrowing the family car.

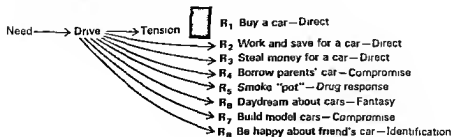


This solution can be profitably considered in terms of the extent of the parents' use of the car and the confidence the parents have in the boy's driving ability and sense of responsibility.

5. "Direct" antisocial responses such as "steal a car" or "steal money for a car" generally provide interesting discussion. Most students will conclude that these solutions will work only when (1) the theft is successful and (2) the boy's values are such that guilt feelings do not arise. This is a rare pair of conditions in most situations.

6. The "drug response" also can be discussed very profitably in this context in terms of alcohol, marijuana, or barbiturate abuse. Although drug abuse would not logically result from frustration over the lack of a car as an isolated cause, it can be discussed as a factor commonly related to personalities that fail to react directly and constructively to personal problems.

7. A major part of the discussion should be devoted to such common defense mechanisms as fantasy, projection, and rationalization. Alert students generally enjoy thinking up good examples. As each one is proposed, the class should discuss its validity as an example, its possible effectiveness as a tension reducer, and its possible effects on over-all mental health. After several examples have been discussed, the diagram might look like this:



As is the case with most discussions, there are a few common pitfalls to

avoid in this example. Unless the teacher emphasizes that the diagram depicts only a few of the many factors that might be present in any given situation, some of the students may develop an oversimplified view of human behavior. They need to realize that the responses discussed are only possibilities that might occur within the total pattern of interrelated forces. Once these limitations have been established, the way is clear for bringing up certain important generalizations. Among these are the following: (1) both socially approved and socially unacceptable responses are similar in that they are directed toward tension reduction; (2) direct purposeful responses of a socially approved nature generally provide the best chance for long-term solutions; and (3) defense mechanisms vary considerably in their over-all effects, with some simply reducing tension to a moderate level, others leading to mental illness, and still others leading to productive and rewarding activity.

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10

Human Sexuality: Elementary Level

Throughout history sexual activity has served as a means of expressing some of mankind's best and worst emotions. The powerful motivations provided by the sexual instinct have resulted, in their most overt form, in highly compassionate and constructive behavior in certain situations and equally ruthless and destructive actions in other instances. For those who accept Freudian interpretations, the study of human sexuality becomes even more complex and paradoxical. According to this view, sexual activity represents the most elemental expression of one's basic life force, or libido, which serves as the underlying stimulus for most varieties of human behavior. But regardless of the differences found among individual interpretations of human sexuality, considerable agreement exists concerning the seriousness and persistence of sex-related problems. The consequences of illegitimate births, venereal disease, family instability, adultery, and divorce are viewed as serious by most responsible members of our society. The more positive and liberal members of this group are also disturbed about the generally negative and repressive attitude that some citizens exhibit toward a human force with such potential for constructive expression.

Historical Perspective

When such problems as illegitimate births, venereal disease, and family instability are viewed in historical perspective, it is easy to find support for a pessimistic view. A cursory review of human activities extending from the beginning of recorded history through Biblical times, the glory of Greece and Rome, the Dark Ages, and the Renaissance reveals instances of adultery, rape, and illegitimacy. Although it is possible to interpret modern trends in a manner that indicates that mankind is making progress in combating these and similar problems, the evidence is far from overwhelming and lends itself to various interpretations as determined by individual biases. Rising divorce rates are viewed by many as an indication that the family as a useful social institution is disintegrating in the face of modern stresses; others feel that the modern tendency to abandon an unsatisfactory arrangement is far better than the earlier practice of avoiding divorce at the cost of lifelong unhappiness and an affectionless environment for any children involved. Rising illegitimate birth rates are viewed by many as evidence of a deterioration of youthful morals; others feel that such statistics indicate an increased willingness to face the consequences of illegitimacy and deal with them in a more constructive manner than a forced marriage that often compounds the difficulties of the situation.

Throughout the twentieth century there have been efforts to deal openly and constructively with sex-related problems. The American Social Health Association, formed in 1914, supported an educational approach to combat the specific problem of venereal disease. The White House Conference on Child Health and Protection in 1932 called for educational programs that would direct the individual's sexual nature in a manner encouraging self-development and happiness while advancing the welfare of society.¹ In 1944, the National Congress of Parents and Teachers called for a well-planned program of "social hygiene instruction extending from the pre-school years throughout K to 12 and on into adulthood."² In response to this growing concern many specific programs have been initiated. Public and private efforts to help the unwed mother have increased. Marriage counselors and family physicians are beginning to accept and deal with sexual conflicts as an important threat to family unity.

Although these efforts have been encouraging, this encouragement is based more on their potential rather than their actual accomplishments. In most instances the programs and services offered are meager in comparison with individual and community needs. Two factors appear to have played a large part in our failure to handle this situation. First, there was the almost total lack of scientific information concerning the sexual aspects of man that persisted throughout most of this century. The only comprehensive

¹White House Conference on Child Health and Protection, *Social Hygiene in Schools* (New York: Appleton-Century-Crofts, 1932), pp. 3-4.

²H. Frederick Kilander, *School Health Education* (New York: Macmillan, 1968), p. 192.

explanation of these phenomena that was based on anything resembling orderly investigation was that expounded by psychodynamic or Freudian psychiatrists and psychologists. Although this provided some useful insights, much of the data supporting it was based on clinical observations of neurotic adults. Useful implications for the important but less pathological problems of "normal" persons were often lacking. Coupled with this lack of comprehensive and reliable information has been the public's general unwillingness to accept the little information that was made available and to respond objectively to the implications of this information. The Kinsey reports on the male, in 1948, and on the female, in 1953, represent cases in point. These pioneer efforts produced much useful information, yet the response of the public was often directed toward discrediting the results or reinterpreting them in a manner that would not disturb traditional views.

Recent Developments

The events of the past few years have given rise to new hopes that American society may finally come to grips with problems related to sexual expression in an effective manner. Sexual matters have gained increasing acceptance as a legitimate area of scientific inquiry. The work of Masters and Johnson³ and other less widely publicized investigators is beginning to provide the accurate and objective information that is vitally needed. Of perhaps equal importance is the growing willingness of the average citizen to discuss this subject openly and frankly. One result of this new openness has been a relaxation of both legal and informal restrictions on what can be discussed and shown in magazines, motion pictures, television, and other forms of mass media. The editors of *Time* magazine attribute a good deal of *Playboy* editor Hugh Hefner's success to his accurate assessment of this new post-World War II public attitude. In their words, "He was the first publisher to see that the sky would not fall and mothers would not march if he published bare bosoms; he realized that the old taboos were going."⁴ These trends of course have proved disturbing to many people. Recently there have been increasing efforts on the part of conservative elements of our society to reaffirm the old legal restrictions and develop new and more readily enforceable legislation embodying stricter definitions of pornography. However, the practical difficulties in interpreting such laws, together with the relentless demand of the younger portion of our citizenry for freedom of expression in all spheres of activity, make it difficult to view these restrictive efforts as anything more than a delaying action. As the barriers continue to lower in the mass media, it is becoming increasingly easy to examine and discuss sexual matters in more formal situations, such as in the classroom.

³William H. Masters and Virginia E. Johnson, *Human Sexual Response* (Boston: Little Brown, 1966).

⁴"Think Clean," *Time*, Vol. 89, No. 9, March 3, 1967, p. 76

The Journal of Social Issues recently devoted an entire issue to "The Sexual Renaissance in America,"⁵ In a summarizing article Ira Reiss pointed to the consistent agreement in the results of major studies which show that "although attitudes have changed considerably during the past 20 to 25 years, that many areas of sexual behavior, such as premarital coital rates, have not."⁶ He cites the modification of attitudes to conform with actual practices as the single most significant change. Sexual practices have not changed; they are simply becoming accepted. Consequently, guilt is less frequent and intense than in past years. Reiss continues with a description of the effects of these trends on young people that carries obvious implications for health education.

Our young people are *not* less sure of their views than were their parents or grandparents—on the contrary they are probably more certain of their sexual attitudes. The difference is that they are more open, vocal and desirous of examining alternatives intellectually; thus awareness is increased.⁷

Many view these changing attitudes as evidence of a deepening problem. They would say that our sexual behavior has never been good and that now we have stopped feeling ashamed of our shortcomings. However, others welcome these developments as a refreshing change from the hypocrisy of the past. Regardless of the ultimate effects of this "new permissiveness," the new latitude given to public discussions of sexual patterns represents a positive gain for the health educator.

The Role of the Schools

One concrete manifestation of this new opportunity is found in the generally improved attitudes of parents and school-board members toward sex education. Within the past few years tremendous support and enthusiasm had developed for school programs of family life and sex education. Within many communities there has been a rapid shift in public opinion, from one of distrust and hostility toward such programs to one so positive as to produce an urgent demand for special courses in this sensitive area. Many of the better-organized and innovative school districts have been able to meet this demand with well-planned and effectively implemented programs which have been well received by all elements of the community. Many other districts, however, were caught unprepared. Here school authori-

⁵Ira L. Reiss (ed.), "The Sexual Renaissance in America," *Journal of Social Issues*, Vol. XXII, No. 2, April, 1966

⁶*Ibid.*, p. 126

⁷*Ibid.*

ties often found themselves pressured into crash programs in an area where persons possessing the competencies for quality teaching are exceedingly scarce. Where these conditions prevailed, parents and other concerned persons were often highly critical of many of the methods and materials employed in teaching sex education. This understandable concern, combined with the less defensible reaction of those who simply view sex education as part of a general move toward permissiveness of all types, has produced some retrenchment in the rush to launch new programs. In a few cases even well-managed programs have come under severe attack. Despite these setbacks, the long-term trend appears to be toward increasing acceptance of sex education as an important part of the school curriculum.

It is not surprising that difficulties are sometimes encountered by those persons responsible for developing units or courses of sex education. Many of the subtopics are sensitive ones and community attitudes vary widely in regard to what content is acceptable or desirable. Another difficulty is that there are so few good programs in existence that might provide guidance for the development of new ones. Menstrual-hygiene education in the form of one or two lectures for girls only has been around for a long time and some districts have been providing basic sex education to boys and girls for a number of years. But the concept of comprehensive kindergarten-through-high school programs of sex education that provide the opportunity for the development of wholesome values and attitudes is comparatively new. In 1966 Mary Calderone, executive director of the Sex Information and Education Council of the United States (SIECUS) said, "Let me disclaim any authority in this field, where at this time there are probably no authorities."⁸ Since that time many new programs have been implemented and much has been learned, but the fact remains that the study of human sexuality is still a new and rapidly developing area of the curriculum.

In 1964 Kirkendall and Calderwood reviewed studies of the sources of sex information and concluded that adolescents were still getting the "majority of their insights about sex from each other."⁹ They continued with a sweeping criticism of the programs in existence at that time. Some of their basic generalizations were:

1. When sex information is obtained from "appropriate sources," it is very limited in scope, meager in content, and always too late in coming.
2. The education received from the "appropriate sources" is

⁸Mary Calderone, "The Development of Healthy Sexuality," *Journal of American Association for Health, Physical Education, and Recreation*, Vol. 37, No. 7, September, 1966, p. 23.

⁹L. A. Kirkendall and D. Calderwood, "The Family, the School, and Peer Groups: Sources of Information About Sex," *Journal of School Health*, Vol. XXXV, No. 7, September, 1965, p. 290.

much more aptly labeled "reproduction education" than "sex education."

3. What occurs between parent and/or teacher and youth in sex education is usually largely a matter of something being told.

4. Parents and teachers lack any clear concept of the outcomes they hope to achieve with sex education for youth beyond "keeping them out of trouble."¹⁰

It would be unfair to apply these criticisms in a general way today, because substantial progress has been made since this review. However, they still apply in many instances and they also serve to show the important problems that were virtually universal not too long ago. Another value of these criticisms is their use as a checklist of major errors to avoid in the development of modern programs of sex education.

A Positive Program

The four points previously listed effectively describe what sex education should not be. The task of describing what it should be is considerably more complicated. The authors' view of this curricular area will be expressed in the form of priority concepts and specific examples of teaching situations in this and the following chapter. As a means of developing a point of view for the consideration of these suggestions, some general points are worth noting.

1. Human sexuality refers to all those qualities that distinguish between maleness and femaleness. The physiological differences are both obvious and important, but in addition, there are the equally important differences in attitude, behavior, and responsibilities that define the male and female role in American society.

2. A sound program of sex education provides young people with the opportunity to (a) obtain accurate and comprehensive information related to the physiological, psychological, and sociological aspects of human sexuality and (b) develop effective *personal* values concerning the sexual aspects of their lives. The need to convey good information is obvious and widely accepted. What is sometimes overlooked is the fact that values are also important determiners of behavior, and behavior is what health education is all about. It is both unwise and impractical for a teacher or a program to attempt to impose preselected values on boys and girls; however, it is possible to help the individual to form a personal set of values within the range of his or her individual family, religious, and cultural backgrounds.

3. The task of developing one's proper sex role is infinitely complex and requires extensive time. There are appropriate concepts to acquire at each stage of one's development; therefore, sex education in its comprehen-

¹⁰*Ibid.*, pp. 291-92

sive sense is required at all school levels. Calderone expressed this view effectively: "if our aim is adults who will use their sexuality in mature and responsible ways, we cannot begin sex education later than earliest childhood."¹¹

4. Sex education is taught most effectively as a part of, or in close relationship to, the broad area of family-living education. Within our society many of the most intimate and important aspects of the masculine or feminine role are expressed within the marriage context. In addition to sexual intercourse, such things as expressions of love and affection and the experiences and responsibilities of parenthood form an important part of family life. Many of these activities of a sexual nature that take place prior to marriage often affect the important attitudes that the individual brings to any future marriage relationship.

OVERVIEW FOR THE ELEMENTARY LEVEL

A review of the growth and development characteristics of elementary school children yields useful implications for school programs of sex education at this level. However, like most other aspects of this topic, one immediately encounters conflicting and controversial issues. One of the most obviously pertinent of these issues concerns the sexual or erotic nature of the preadolescent child. Many parents and educators do not accept, or will not accept, the fact that such characteristics exist. Our society generally presumes that children are essentially free of any frankly sexual or erotic yearnings until the time of puberty. This assumption contributed to the ineffectiveness of many of the sex education programs of the past that were "almost always too late in coming."¹² Even today this misconception persists among the general public in spite of the views of most psychologists, sociologists, and anthropologists.

Childhood Sexuality

Much of the confusion can be blamed in part upon the propagation of the Freudian-based theory of psychosexual development. This elaborate system, with its well-defined and relatively inflexible stages, has been criticized severely and rejected in whole or in part by many behavioral scientists. Most of those parents and educators who did not initially dismiss the concept of psychosexual development on emotional grounds quickly accepted the technical criticisms of hostile professionals and laid the disturbing idea of childhood sexuality to rest with a sigh of relief.

What many persons overlooked, however, was the nature of the effective rebuttals to this Freudian-based theory. For the most part these rebuttals did not deny the existence of preadolescent sexuality itself; what was

¹¹Calderone, *op cit.*, p 24

¹²Kirkendall and Calderwood, *op cit.*, p 291

rejected was the specific stages and the dynamics or pattern of causation advocated by the Freudian school. Broderick¹³ illustrated this point very effectively in his references to the findings of both cultural anthropologists who studied sexually permissive societies, and surveyors of sexual behavior in American society, specifically Kinsey^{14, 15} and Ramsey.¹⁶ The evidence from both of these sources conflicted with the classical Freudian concept of latency because preadolescent children were shown to have *more*, rather than less capacity for erotic stimulation than Freud postulated. The children of all cultures exhibited considerable interest in sexual matters. Many engaged in such behavior as masturbation and homosexual or heterosexual sex play. The main difference between American children and those of more sexually permissive cultures was the American tendency to hide sexual interests from adults.

This type of evidence has led most thoughtful advocates of sex education to accept human sexuality, both in the broad sense of sex roles and in the narrow sense of capacity for erotic stimulation, as a quality that exists at every age level. In the words of Mary Calderone, "there must be full understanding and acceptance of the sexuality of all age levels, beginning with infancy and continuing throughout life."¹⁷ The specific nature of the educational implications resulting from the acceptance of this concept of sexuality will vary according to individual interpretation of this concept. However, it seems clear that sex education at the elementary level is not so much preparation for some future situation as it is education for sexual beings in an active stage of development.

Sex Roles

Much of what attracts the mature adult toward his or her fiancé or spouse consists of those personal qualities of masculinity or femininity that extend beyond mere attractiveness as a sex partner. Some of these characteristics, such as type of apparel and presence or absence of cosmetics, seem quite superficial, but closer study generally reveals differences of a more substantial nature. Boys often seek sweet and compassionate qualities in the personalities of their feminine companions. They expect girls to have a typically feminine pattern of interests. A boy would rather see a girl active in planning school dances and social events than seeking membership in the school's auto club. He seeks one who will admire his accomplish-

¹³Carlred B. Broderick, "Sexual Behavior Among Pre-Adolescents," *Journal of Social Issues*, Vol. XXII, No. 2, April, 1966, pp. 6-21

¹⁴Alfred C. Kinsey et al., *Sexual Behavior in the Human Male* (Philadelphia: Saunders, 1948)

¹⁵_____, *Sexual Behavior in the Human Female* (Philadelphia: Saunders, 1953)

¹⁶Glenn V. Ramsey, "The Sexual Development of Boys," *American Journal of Psychology*, Vol. 56, 1943, pp. 217-33

¹⁷Calderone, op. cit., p. 23

ments rather than compete with them. Girls, on the other hand, generally expect boys to exhibit those dominant and aggressive traits typical of the masculine role. A boy is expected to show a marked degree of independence, to be a person who generally relies on himself rather than on the help and support of parents and other adults. The qualities that lead to popularity in the preadolescent "gang" or in the teenage dating set often seem silly and ill conceived, but these qualities represent the earlier stages of characteristics that acquire more serious connotations at a later stage, when courtship becomes a search for a life-long partner.

The specific nature of the sex role changes, of course, from one year to the next, with some aspects operating almost on a "fad" basis. However, other qualities retain their importance and are more permanent. Certainly we have seen a reduction in the more extreme differences in the ideal masculine or feminine personality. This appears to represent a relatively well-defined long-term trend toward more neuter characteristics. However, the underlying physiological differences will undoubtedly place limits on this trend and preserve the meaningfulness of distinct sex roles.

Family Living

In spite of all the notoriety concerning the troubles of the American family, many couples avoid the well-published pitfalls and maintain good homes with effective and enduring affectionate relationships among the family members. Where do these fortunate people develop the knowledge, skills, and attitudes to accomplish this? The most widely supported view maintains that they acquired most of these qualities by participating in, or reacting to, their previous family life as children in the homes of their parents. This preparation does not, of course, take place in a single pre-marriage talk with one's parents. It occurs on a daily basis and encompasses thousands of learning experiences over perhaps twenty years of life as a junior family member. Consequently, if the school seeks to exert a favorable effect on this process, it must do more than offer a single unit on family living at the senior-high level. Ideally, a school program of family-life education would parallel the child's career as a family member and assist him in learning from this experience.

Many children are exposed to family customs, practices, and attitudes that are far from ideal. A good school program can partially counteract these negative experiences by making the child aware of other alternatives; this can be done in a manner that does not involve undue criticism of his own family life. Every family possesses at least a few characteristics worthy of emulation. Learning experiences at school can increase the child's awareness of these desirable qualities and enhance the possibilities that they will be incorporated into his permanent value structure.

Human Reproduction

As noted earlier in this chapter, the sex education programs of the past were often criticized for their preoccupation with the physiological aspects of conception and reproduction. Anything that touched upon the broader aspects of human sexuality that might provide implications for the formation of values or behavioral decisions was viewed as the responsibility of the home or the church. More recently, as a reaction to this imbalance, there has been a tendency to overreact in the opposite direction. In their efforts to embrace the broader and more sophisticated view, there has been a tendency for modern curriculum makers to neglect the basic facts of human reproduction.

Basic biological information concerning the reproductive system, sexual intercourse, ovulation, conception, prenatal development, and the birth process still represents an important element, if not the foundation, of school programs of sex education. Ignorance in this area often results in fears and anxieties that interfere with the normal development of wholesome attitudes and values related to the broader aspects of sexuality. The better programs include appropriate content related to human reproduction at each school level, from the primary through the high school grades.

INSTRUCTIONAL APPROACH

Perhaps the most important goal one should strive for as specific decisions are made on the selection of content and learning activities for a particular class is an acceptance of sex-related content as a normal and natural area of study. Pupils should view such material as interesting and useful but not something heavily charged with emotion. It would be unrealistic and probably undesirable to expect pupils to view the study of human reproduction with the same reaction they might show toward the study of nutrition. However, certain procedures are needed to avoid excessive inhibitions in class discussions or an equally undesirable whimsical or "tittering" type of reaction. The achievement of good pupil responses will depend most basically on the appropriateness of the content and the general quality of the teaching involved in its presentation; however, there are a number of specific procedures that can help.

Administrative Arrangements. Who should do the teaching? Where should it take place? How should pupils be grouped for this instruction? Generally speaking, the answers to these questions are simple. Sex education should be taught by whomever teaches the other health topics; at the elementary level this is normally the classroom teacher. Instruction should take place wherever health instruction normally takes place, probably in the regular classroom. Pupils should be grouped the way they are normally grouped, which is usually in a mixed class of boys and girls. As is the case with any other topic, there are probably times when assembly

programs or resource speakers are warranted, but these should not constitute the main focus of the program. It may be advisable for the girls to meet separately to consider the specific aspect of menstrual hygiene, but facts about ovulation, sperm production, and sexual intercourse have obvious importance to both sexes and should be presented to the class as a whole.

Timing and Sequence. The problems of student response are greatly complicated by the too common practice of waiting until the onset of puberty before providing pupils with their first exposure to classroom sex education. However, when boys and girls experience sex education as a normal part of the curriculum beginning in the early grades, many of the sensitive topics lose their emotional charge and thus permit a degree of detachment conducive to serious consideration of sex-related matters.

In spite of the general endorsement of a K-12 program, elementary school teachers occasionally find themselves charged with the responsibility of providing fifth- or sixth-graders with their first experiences with sex education. In such situations the logical strategy is to devote considerable time in the early stages to discussion of topics with low stimulus value, such as reproduction in lower animals or simplified principles of heredity. Once the pupils become accustomed to this general area of study they are better prepared to deal with the more sensitive topics. This procedure, in effect, devotes the early part of the unit to the provision of the necessary background of experiences that the total program failed to provide in the lower grades.

The Teacher's Attitude. Perhaps the most important factor affecting pupil response to sex education is the emotional tone the teacher exhibits when presenting it. Once again the key is naturalness. Insofar as possible human sexuality should be treated as a routine health topic. It is an important topic, but so are the others. Some teachers adopt an artificially serious "great-mystery-of-the-universe" type of demeanor, which often serves to prevent breaches of decorum on the part of the pupils; however, it also effectively deters any serious discussion among preadolescents who cannot match this serious mood. It is also possible to err in the other direction, with the jovial "let's-have-some-fun-talking-about-sex" approach. This appears to be a defensive reaction on the part of teachers who feel uneasy with the topic. Although young children may not analyze it as such, they will probably react to its basic insincerity.

Teachers vary considerably in their general teaching style. What is appropriate and effective for one might be inappropriate and poorly received when mimicked by another. Within this broad range of individual patterns, the most successful teachers are generally found to use the same matter-of-fact approach with this topic that serves them well with other health topics.

Suggested Concepts

The concepts presented in this section are based on a review of several sources.¹³ An effort was made to develop a balanced list of those concepts that appear to merit particular emphasis at the elementary level. Persons charged with the selection of concepts for particular programs would be well advised to review several such lists as a means of identifying those most suitable for the needs of their specific situation.

1. *All living things reproduce their own kind.* Living things come only from similar organisms; reproduction is necessary for the preservation of life. Most animal forms of life are equipped with certain instincts designed to aid this process.

2. *The reproduction of many forms of life, including man, involves the uniting of male and female substances.* All mammals, together with most of the higher animals and many forms of plant life, reproduce by means of sexual reproduction wherein a male sperm is united with a female egg or ovum. In this manner both sexes contribute equally to the hereditary potential of the new organism.

3. *Human beings, like other mammals, carry out their early stages of development within the protective environment of their mother's body.* The mother's uterus normally provides extremely favorable conditions for the child during its earliest and most delicate stage of development. The health practices of the mother are particularly significant during this period.

4. *Typical physiological changes take place as one approaches sexual maturity.* At a certain stage in one's physiological maturity, endocrine secretions are produced which stimulate the development of both reproductive capacity and secondary sex characteristics.

5. *The sex drive is an innate and powerful force which is related to human pleasure and reproduction.* Most animal forms of life possess certain instincts which encourage the reproduction process; in man, the sexual instinct lends itself to a high degree of voluntary control.

6. *Boys and girls develop typical differences in their personalities, interests, and modes of behavior as they mature.* Physiological differences between men and women have traditionally led to different duties and responsibilities, which in turn have produced general personality differences.

7. *The family serves as a means of satisfying many of the physical, psychological, and sociological needs of its members.* The infant receives vital physical care, the child receives training and guidance, adults find a socially sanctioned sexual outlet, and reciprocal affectional benefits are experienced by all

¹³Most helpful were "The Sexual Renaissance in America," special issue *Journal of Social Issues*, Vol. XXII, No. 2, April, 1966; "Growth Patterns and Sex Education," *Journal of School Health*, Vol. XXXVII, No. 5a, May, 1967; *Health Concepts: Guides for Health Instruction*, American Association for Health, Physical Education and Recreation, 1967; and *School Health Education Study. Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press 1967).

family members; these and other important functions may occur within an effective family.

8. *Effective family functions depend upon the appropriate behavior of each family member.* Each family member can contribute to the happiness and well-being of the others; misfortunes which render one member incapable of performing his role adversely affect all other family members.

9. *Each family develops a specific set of common attitudes, values, and modes of behavior which differ in some degree from those of any other family.* As a family is formed, each individual brings his own unique set of characteristics to the marriage; as the marriage develops, additional experiences interact with these characteristics in complex ways.

Suggested Techniques

One general type of teaching technique that merits special attention is that of incidental or informal instruction. The practice of taking full advantage of spontaneous questions or unplanned occurrences that provide the opportunity for impromptu coverage of content provides a valuable means of supplementing any health topic on any school level. However, incidental teaching as applied to sex education at the elementary level assumes particular importance. Nothing seems quite as natural as a mature adult rendering a sincere answer to a question of genuine interest to a child. Unfortunately, parents and other adults often respond to questions concerning sex with either false information or a complete evasion. Children have a right to expect better treatment from those persons with responsibility for imparting health information. The elementary school teacher who responds naturally and sincerely to the impromptu sex questions of children will be laying a sound foundation for a good total class response to any scheduled sex education that might occur in the future.

When selecting specific techniques for regularly planned teaching in sex education, one would do well to keep in mind Kirkendall and Calderwood's criticism of earlier programs, namely, that they have too often consisted "largely of a matter of something being told."¹⁹ The use of techniques designed to stimulate pupil involvement in open discussions not only results in better learning, but also provides the teacher with constant feedback on how content is being received and what particular aspects of any topic are of most interest to the class. Such pupil-centered techniques as buzz sessions, sociodramas, and problem stories are particularly useful when dealing with material pertaining to sex roles, sexual behavior, and the responsibilities of various family members. With these topics, the development of values and attitudes merit special stress; pupil involvement is needed if this task is to be accomplished.

¹⁹Kirkendall and Calderwood, *op. cit.*, p. 281

Teacher-centered methods, such as the use of films and textbooks, are particularly appropriate in handling content that is basically scientific and noncontroversial, such as the structure of the reproductive organs, the prenatal development of the child, and the birth process. Films and other audiovisual aids can often be of particular use to the beginning teacher, because they can provide a professional touch to the handling of particularly sensitive areas. Simple classroom experiments, such as observing the birth of hamsters or guppies, also add much to the study of the biological aspects of this topic.

Although it is inadvisable to rely on resource speakers as the main way of presenting content in sex education, it is equally unwise not to take advantage of any good opportunities that might be available in this area. A well-trained school nurse may bring special expertise to certain topics in sex education as well as to other health topics. Occasionally, interested and willing obstetricians and pediatricians are available who have a knack for dealing with young people. They can often provide insights into aspects of prenatal care, birth, and infant care that have meaning and value to elementary children.

PRACTICAL APPLICATIONS: ELEMENTARY LEVEL

The following examples are hypothetical and represent an effort to show the results that might be achieved with teaching techniques that are particularly appropriate to family-life and sex education.

I. Suzie's Babies

The old-fashioned procedure of telling children about "the birds, the bees, and the flowers" has taken on undesirable connotations in this more sophisticated era. It implies that the child's real interest in the facts of human reproduction has been unsatisfied by diverting his attention to the lower animals. According to popular cartoonists and humorists, parents and teachers generally delay in providing even this meager substitute until long after the young person has been informed of the basic mechanics of human conception from other sources. Unfortunately, there has been a tendency to overreact to this situation by omitting any study of lower animals as a means of understanding human reproduction. As will be illustrated in the following example, animals can serve us well in illustrating certain principles of reproduction which apply to humans. The key to the validity of this general technique is the proper selection of main points or generalizations for emphasis and the manner in which questions are handled that have human implications. This approach also permits children to observe many aspects of the reproductive process directly; this has special value at the primary level, where concrete experiences are especially meaningful.

- Concept:** All living things reproduce their own kind.
Pupils: Developed for second-graders of average socio-economic status; recommended for all primary grades.
Technique: Classroom observation.

One of the oldest and most useful ways to learn about natural phenomena is by careful and systematic observation. When carried on in a highly refined manner, we might term it *observational research* as opposed to *experimental research*, where some factor is varied to study a narrower aspect of the phenomena under consideration. The children in our example observe a white rat throughout her pregnancy and during the early days of her litter. During this time they also observe the development of frog eggs in an effort to obtain some concept of what was taking place within the womb of the expectant mother. Although the mature frog differs greatly from the rat and even more so from the human, there is considerable similarity in the embryonic development of all three organisms. Even at the high school and college levels frog or salamander eggs are useful for illustrating early cell cleavage, the formation of the blastula, the formation of the neural groove, and other important steps common to the development of the human embryo. As a means of illustrating much simpler content in the primary grades, the comparison of frog and man have even greater usefulness.

THE EXAMPLE

The arrival of Suzie the rat had produced a good deal of excitement among Miss Hannibal's pupils. A sixth-grade boy and girl had delivered the interesting little animal to their room and showed them how to feed and care for it. Mr. Johnson's sixth-grade classroom was the school's unofficial science center, so he was able to provide the necessary cage, food pellets, and other items to get Suzie comfortably established in her new home. That afternoon and the next morning most of the children had a chance to get a close look at her so they were much calmer the following afternoon when Miss Hannibal brought her in front of the class once more.

"In all of the excitement of her arrival yesterday, I didn't get a chance to tell you one other important thing about Suzie. In a little less than three weeks, she will probably have babies."

The children seemed excited at this prospect but not unduly so. A few of them were already somewhat familiar with this event because of the arrival of puppies or kittens in their homes; many others were too ignorant of the whole process to become very concerned. This resulted in quite a good emotional climate for class discussion. Miss

Hannibal began the session with a carefully thought-out question.

"What do you think we would see if we could look inside Suzie and see the place where her babies are going to grow? Can anyone try to tell us?"

Marvin raised his hand and said that he thought that "we would find teeny-tiny rats inside of Suzie."

"Suzie will have little rats inside her just before they are born, but that won't be for several days," responded Miss Hannibal.

Betty was a bit more accurate when she said, "Babies start from little seeds like radish plants do, so Suzie's got seeds inside her now."

"That's quite a good answer, Betty," said Miss Hannibal. "Animals do grow from little things like seeds, only we call them eggs."

"Are they like chicken eggs?" asked Harvey.

"Well, they are quite a bit different from chicken eggs, Harvey. They are much smaller and have no shells."

Miss Hannibal felt that the time was ripe for her main proposal. She explained that although it was impossible to see inside Suzie, there were some animals, such as frogs, that laid eggs that the class could watch grow.

"Don't you think it would be a good idea for me to ask some of the sixth-graders to get some frog eggs for our classroom?"

Another Delivery. Needless to say, the children agreed to this suggestion and Miss Hannibal found Mr. Johnson ready to put a couple of his boys to work on her request. Two mornings later, as she was in her room preparing for the arrival of her pupils, the boys marched in with a gallon jar full of pond water and containing six masses of frog eggs. They also brought in five shallow glass dishes called finger bowls and five large magnifying glasses. These latter two items were on loan from Mr. Johnson's room.

After the children left that afternoon Miss Hannibal filled the five finger bowls with pond water from the large jar. She removed one of the twigs with its attached egg mass and snipped off a lobe containing fifty or so eggs and put it in one of the finger bowls. She repeated this procedure using a different egg mass for each bowl to minimize her reliance on any one mass that might be defective. She did notice that one group of eggs were oriented so that their light-colored side was uppermost, indicating that they were not fertilized. She selected these for one finger bowl.

Next morning the early-arriving children were once again rewarded with something new to inspect. It was interesting for them to get a closer look at the eggs than that provided by the gallon jar that they had seen the previous morning. By the time class resumed after lunch, most of the children had managed to observe the eggs under this new arrangement. This toned down their excitement somewhat, so they

were able to listen to directions and carry out instructions in an orderly manner when Miss Hannibal gave out the magnifying glasses. In their normal classroom arrangement the children were seated at tables that accommodated four or five children each. Miss Hannibal asked one pupil from each table to get one finger bowl and carefully carry it to his table. Each child had an opportunity to view the eggs with the magnifying glass as the bowl was passed from pupil to pupil at Miss Hannibal's command. The children were directed to place the magnifying glasses close to the finger bowl and to move it upward until they could see the eggs clearly. They were asked to look at the eggs closely so that they could tell about them later; they were also cautioned to keep their fingers out of the bowls and off the lens of the magnifying glasses. All this was accomplished with only a couple of minor spills.

Beginning the Experience Chart. After the finger bowls had been returned to their spot on the window ledge, Miss Hannibal asked the children to describe what they had observed. She asked each volunteer to describe any one thing they had noticed about the eggs. As each characteristic was reported she asked the other children if they had seen the same thing. After the reported fact was verified, it was recorded on an "experience chart" consisting of a large piece of paper that had been taped to the blackboard. Light lines had been drawn on the chart to guide the entries and plenty of room was allowed for future entries. After the first session the chart looked something like this:

Watching Frog Eggs Grow

First Day: The eggs are small brown and white balls.

At the close of the session Miss Hannibal told the children that starting tomorrow, the magnifying glasses would be left out and they would be able to look at the eggs during any of their free moments.

It was three days later, on Monday, before Miss Hannibal discussed the eggs with the children again. This time it was not necessary to have the children observe the eggs during the formal part of the lesson, because most of them had observed the eggs earlier in the day. However, she did have to use special care to screen out erroneous reports based on faulty memories or superficial observations. After some discussion the children agreed that the eggs had definitely changed shape and that each egg seemed to have a tail and a head. They also observed that part of the egg did not change; the white belly still looked like an egg. When it seemed as though the major points had been covered, Miss Hannibal made a second entry on the experience chart. It was numbered *Fourth Day*, because it was the fourth day since their first observation. The chart now looked like this:

Watching Frog Eggs Grow

First Day: The eggs are small brown and white balls.

Fourth Day: A head, tail, and white tummy can be seen.

The Male Frog. Miss Hannibal had been puzzled about one important aspect of the project ever since the first observation session, so she was relieved when one of the boys said, "One dish of eggs is not like that."

"What do you mean, Billy?" asked Miss Hannibal.

"That one over there on the end," answered Billy, pointing with his finger. "The eggs are still little specks and they're mostly all white."

"Did anyone else notice anything different about those eggs?" she queried.

Two other children confirmed Billy's report. At this point Miss Hannibal decided to impart some information of her own.

"I've been watching those eggs too, and I think I know what the trouble is." At this point she paused to see if the children were really interested, then continued. "I don't think there was any male frog around to help those eggs start growing."

This left many of the children puzzled. Billy, whose earlier question had started all this, asked again, "What does the male frog do?"

"He puts something special from his body in the water around the eggs to make them start growing into frogs."

"Won't those eggs ever change into frogs?" asked Jeannie.

"Let's watch them and the other eggs over the next few days and find out," suggested Miss Hannibal.

This arrangement seemed to satisfy most of the class. A few of the children seemed quite interested in the unfertilized eggs but the majority were more concerned with the eggs that were developing.

Tadpoles' Birthday. Two days later another discussion was held and the children reported the appearance of eyes and mouths in most of the developing tadpoles. This information was duly recorded on their experience chart. The children also noted that there was no change in the appearance of the unfertilized eggs. After another two days passed, Miss Hannibal once again called the class together to report on the tadpoles. However, everyone knew in advance what the main entry on the chart would be, for that morning one of the children found that a few of the tadpoles from one egg mass were swimming freely in the bowl. Some of the children were concerned because the tadpoles were so different from the frogs that they had apparently been expecting, but other class members who had raised tadpoles at home assured them that the "big feet" and the "big mouths" would someday arrive.

At this point Miss Hannibal obtained a small aquarium and a few

water plants and transferred the tadpoles to this more suitable habitat. The water plants provided sufficient oxygen for the tadpoles and provided an interesting setting for their display. However, three days later, on Monday, the attention of the class shifted to new developments.

The Paper Collector. Monday morning a couple of the children who were responsible for Suzie's care were letting her run about on the counter top to get a little exercise when they noticed something unusual. She seemed very interested in a stack of art paper that was lying near her cage.

"Gosh, Miss Hannibal," said Jeff, "we'd better move those papers before she tears them up."

"You're right, Jeff," replied Miss Hannibal. "Let's get them out of reach, but I also think we'd better give Suzie some paper and see if we can tell why she's so interested in it."

Miss Hannibal tore a piece of paper toweling into narrow strips. Jeff placed Suzie back in the cage and dumped the handful of paper into her cage. Suzie immediately began dragging the strips over to one corner of her cage, much to the fascination of the children. They watched her for some moments before Jeff finally said, "I'll bet she's building a nest!"

"And you know what that means, don't you?" added Sarah, who had joined the group.

"Sure," replied Jeff, "her babies will come soon; maybe even today!"

According to Miss Hannibal's count Suzie still had three or four days to go, so she attempted to tone down the children's expectations. "It may be a few days yet, children, so don't get discouraged if the babies don't come right away."

In their next health lesson their discussion focused on the parallels between Suzie's pregnancy and a typical human pregnancy, which some of the children had observed in their homes. Miss Hannibal generally sought to lead the class toward an acceptance of the basic naturalness of the reproductive event. "Yes, we need to be gentle with Suzie, but we always should be gentle with her. . . . Expectant mothers should eat good, wholesome foods, but we should always eat good, wholesome foods. . . . Yes, it sometimes hurts when the babies are coming out, but everyone experiences some pain as part of living."

Watchful Waiting. During the next couple of days the children watched Suzie closely. Each child wanted to be the first to report the beginning of the birth process, but this vigilance produced only an occasional false report. Then, on the morning of Suzie's twenty-second day of pregnancy, Miss Hannibal arrived at the classroom before any of

the children and discovered Suzie nursing her newborn litter. As the children arrived before class, they were naturally excited, but for the most part they were cautious about getting too close to her cage. They peered intently into the cage, hoping to obtain a glimpse of the babies, but there was little to see except Suzie's eyes peering back at them out of a mass of white fur.

It was two mornings later before Miss Hannibal felt it was safe to remove one of the newborn babies so that the class could get a brief look. Suzie and her children remained with the class for the remaining five weeks of the school year. During the last two weeks of this period the young rats were weaned and placed in a separate cage. These lively young animals and the aquarium full of developing tadpoles contributed much to the general classroom environment long after Miss Hannibal had concluded her formal unit on reproduction.

A close analysis of this example would lead one to conclude that Miss Hannibal was not "teaching a unit" as much as she was "creating an environment" for incidental learning. Even in her formal sessions, she did not force-feed the children with information that might not interest them. Instead, she encouraged them to observe and report their findings. She guided them away from erroneous assumptions and toward accurate interpretations. She did not try to provide her class with a complete educational program in human reproduction. These were second-graders who still had a number of relatively calm prepubescent years before encountering the heterosexual challenges of adolescence, so she was content to work on the foundations rather than tackle the total structure.

The curriculum guide for her district did not call for direct teaching of the male role in reproduction at this grade level, thus permitting Miss Hannibal to take a flexible position toward this sensitive topic. The children asked what the male frog had to do to help the eggs, so she told them. This particular class did not inquire about the fertilization of the rat's ova, and she did not volunteer the information. If they had, Miss Hannibal would have told them that a male rat put something in Suzie to help her eggs grow and this probably would have been accepted without undue excitement by children of this age. Presumably, she would have been prepared to provide more details if any one had wished to pursue the matter further.

II. Chain Reactions

Those of us who are willing to give thoughtful consideration to what sociologists tell us about the dynamics of American family life sometimes despair of ever finding anything of practical use in their offerings. Yet although many aspects of family life seem to defy analysis, the concept of the interdependence of the health and well-being of the

members within a family appears well supported. Negative factors affecting one member—whether physical illness, injury, or psychological stress or anxiety—have obvious and subtle effects on other family members. Positive factors are equally potent. The direction of the effect of a new occurrence of factor is not always the same for all family members. Mother's illness may give daughter a chance to acquire needed confidence in her ability to discharge responsibilities. Conversely, Father's promotion may burden the family with a new social status it is not prepared to handle. These things seem obvious, but people too often merely react to important occurrences and give little thought to the possibility of influencing the chain of events that they might produce. The teaching situation that will be described in this example illustrates how children might be made aware of family interdependence at an early age.

Concept: Effective family functioning depends upon the appropriate behavior of each family member.

Pupils: Developed for first-grade children in an urban setting of average socioeconomic status; generally recommended for all primary grades.

Techniques: The open-ended story, overhead projector.

This example involves the use of the overhead projector (see pp. 138-141) to provide interest and structure to the discussion preceding the main technique for the unit, which is the open-ended story (see p. 131). Although overhead transparencies are ideally suited to this purpose, an attractive set of still pictures will also work quite well in the typical story-telling situation of the primary grades. Few facts or ideas actually need to be presented to help children develop a meaningful concept of "family interdependence." The pupils themselves can provide the facts; the teacher's task is to make the children sensitive to the knowledge that is already available to them. It is becoming so fashionable to emphasize the problem of poor home environments that one may overlook the fact that there are at least a few children who come from well-managed homes that maintain a wholesome climate. These children often carry the load in the discussion of family-living topics, but almost any pupil can make worthwhile contributions to this type of discussion if proper leadership is employed. The following procedures show how primary-school children might be led toward an awareness of family interdependence.

1. Show the children a picture of a typical family by use of the overhead projector or still pictures; this picture should probably include a father, mother, and two or three children. One of the first topics to discuss would be the ways other families might differ from the one shown, such as (a) the absence of a father or mother because of death,

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1. Show the children a picture of a typical family by use of the overhead projector or still pictures; this picture should probably include a father, mother, and two or three children. One of the first topics to discuss would be the ways other families might differ from the one shown, such as (a) the absence of a father or mother because of death,

divorce, or separation; (b) the presence of grandparents or other relatives living in the same dwelling; and (c) the difference in race or socioeconomic background. When possible, have transparencies ready to depict these common differences.

2. As part of the same discussion, or perhaps in a succeeding one, lead the children into a discussion of the role of each family member in terms of contributions to the happiness and welfare of the other family members. Examples: father (and perhaps mother) works to make money; children help with chores where appropriate; help and sympathy is extended to troubled members; and most important of all, family members provide love for each other. The mechanical aspects of dividing work responsibilities within the family are simple and worth discussing. The more difficult aspect of emotional interdependence can be approached by asking the children to "tell about times that someone in your family helped them feel better when they were unhappy" or "tell if you have ever helped cheer up someone in your family when they were sad."

3. After the children have gained some understanding of variations in family structure and in family roles, they are ready to tackle the basic concepts of interdependence or family dynamics, provided that these concepts are presented in appropriate terms. The most logical approach is to set up a situation wherein the pupils can consider the effects of some change in the status of a family member. Examples: father loses his job; father gets promoted; mother is expecting a baby; a new baby arrives; grandfather comes to live with us. The following open-ended story portrays a simple and uncomplicated situation that many children are familiar with:

Typical lead-in: Today I'm going to tell you a story about a family. It's going to be a different kind of story because I'm not going to finish. I'm going to call on one of you to finish it for us, so try to remember each little thing in the story so that you can make up a good ending.

Story text: Billy, who was five years old, and Jo Ann, who was eight, lived with their father, mother, and little baby brother in a neighborhood something like ours right here. Billy and Jo Ann always enjoyed breakfast time at their house. Since father worked hard helping build big tall buildings, he needed a lot to eat in the morning, so mother always got them up early and cooked lots of good things, like bacon, ham, hotcakes, or waffles. Jo Ann helped mother by giving the baby his morning bottle. Billy helped mainly by dressing and getting ready for school mostly by himself. He thought that was pretty good for a kindergarten boy. It took Father a while to shave and get ready for work but he usually finished these chores in time to help Mother set the table. Most of the time Father had to rush away to work as soon as he finished eating, but Billy and Jo Ann had time to clear away the dishes before getting ready for their walk down to the school bus stop.

Billy came home at lunche time, for he was all through with school by then. That was a special time for him, since he and Mother had lunch all by themselves. After lunch, he generally spent the rest of the time playing with his friend Kim, who lived just two houses away. Jo Ann was the next to get home; she generally started right in on her homework, because you have to work pretty hard when you are in the third grade. But the time both children enjoyed most was when Father came home from work. Billy always made sure that he was home from play by this time. As soon as the car stopped, he would run out toward the driveway, where Father would lift him up on his shoulder and carry him back to the house. Jo Ann usually wanted to tell or show him what she did in school that day. After kissing Mother hello, he would spend some time with them. One of their favorite things to do was to read the comics in the evening paper.

That evening while doing the dishes something happened to Mother. She had hardly touched her food during dinner because she didn't feel very well and afterward she started to shiver and shake all over. Father decided to call Dr. Powell to see what to do. Father hung up the phone and told Billy and Jo Ann, "I have to take Mother to the doctor's office. I'll see if Mrs. Marsh can stay with you while we're gone."

Mrs. Marsh, the next-door neighbor, was able to stay with them. Billy and Jo Ann were worried because their mother had never been this sick before. When Father and Mother returned, the children found out that she had a bad case of the flu and had to stay in bed for at least two days. Mother took some medicine that she and Father had picked up on the way home from the doctor's and went right to bed. Just then the baby started crying and Jo Ann said, "Golly, it's time for his night-time bottle already." Father asked if she could feed him and she said, "Yes, I can feed him if you can heat the bottle on the stove. Mother never lets me do that part." As Father put the pan of water on the stove, he said, "I think I'd better set the alarm a little earlier tomorrow. Things are going to be busy around here with Mother sick."

Next morning Billy and Jo Ann were still sleeping soundly when Father's alarm clock started ringing.

4. At this point the teacher could stop and call for volunteers to complete the story. First-graders will often overlook major points in their efforts to complete stories such as this. The following is a possible reply:

The little boy and girl got up and went downstairs and fixed breakfast. Then the father got up and shaved and came downstairs and they all ate a big breakfast. Then the little boy and girl went to the bus stop and father went to work.

One tactful way to handle this contribution, with its gross omissions, would be to say, "That's not a bad story for the first try, but someone else can probably make up a better ending now that they've heard yours." An ending with a little better quality might go like this:

by the events immediately preceding it and by the general setting in which it takes place. Was the film properly selected on the basis of content, grade level, and the technical quality of its production? Were the children properly prepared for the content of the film? Did the teacher establish a proper emotional climate for learning? Were the mechanical aspects of the film projection handled with a minimum of distraction? If these questions can be answered in the affirmative, then the teacher will have a good opportunity to guide a productive discussion. Good personal preparation resulting in a reasonable command of the subject matter involved is the main ingredient needed to take full advantage of this situation. However, the anticipation of the type of questions that are likely to arise is another highly useful procedure. The most effective and most obvious way to find out what sort of questions will be asked is to show the film and take one's chances on the first occasion. Many teachers have had to start this way; they experienced many awkward and embarrassing moments, but they generally survived and improved with succeeding groups of pupils in the years that followed. Fortunately the time has passed when the beginning teacher must acquire this information the hard way. Discussion guides accompany most of the good audio-visual aids assigned for sex education. These usually contain background information for the teacher as well as typical questions to expect from one's class. The *Journal of School Health*, in its special issue covering "Growth Patterns and Sex Education,"²⁰ includes a list of commonly asked questions for each grade level. Examples of some of the more difficult questions for grade 5 are the following:

1. Does a sperm have to come from the man? How does this happen?
2. Can a sperm ever get into a woman if she isn't married?
3. What if a woman has a baby before she is married?
4. Does the husband have to help to have the baby?²¹

Questions like the preceding require some planning with regard to choice of terms and phrases and what to emphasize. However, the majority of the questions generally require accurate knowledge rather than verbal adroitness in the teacher's response. Examples of these are the following:

1. How can one cell turn into so many?
2. Do boys grow the same way girls do?
3. Why doesn't my brother look like me?
4. What should you do or not do when you menstruate?²²

²⁰"Growth Patterns and Sex Education," special issue, *Journal of School Health*, Vol. XXVII, No 5a, May, 1967

²¹*Ibid.*, pp 31-32

²²*Ibid*

The course work involved in one's professional preparation enables one to deal with many such questions; many good sources are available for additional study while on the job. Most teachers find that a reasonable investment of time in added personal preparation for their responsibilities in sex education pays handsome rewards in teaching satisfaction. However, in spite of these efforts, questions will arise for which the teacher is unprepared. It is somewhat paradoxical that the teacher who does the best job of creating a good learning environment is the one most likely to stimulate a wide variety of difficult questions from the class. However, such teachers soon develop various strategies for dealing with these questions. Often the questions will be obviously highly technical or not very meaningful to the class in general or even to the questioner. If a child asks, "What color is the medicine used when the mother has a 'spinal' at the hospital?" the teacher may often, but not always, perceive that it was rather lightly asked. It might be answered with a simple, "I'm sorry, I don't know." However, if the child inquires as to the effectiveness of drugs given to lessen the mother's pain, then either the teacher or some member or members of the class should seek an answer from a reliable source if the answer is not immediately available.

Some of the questions that involve value judgments or knowledge that many of the children probably possess are sometimes best turned back to the group. Such questions as, "Will my parents love me just as much when our new baby comes?" or, "How does the mother know when it's time to go to the hospital?" can usually be answered very effectively by pupil volunteers. In these cases the teacher's proper function is to guide the class toward acceptable conclusions. Other questions are likely to be too delicate for many classes to handle. The specific way to handle these questions varies greatly according to the social maturity of the particular class, their previous learning experiences, and the teacher's background and particular style of teaching. The following excerpts from the American Medical Association's *A Story About You*²³ booklet for the upper elementary grades illustrates one way to handle some of the more sensitive topics.

Sexual intercourse: At times love that a father and mother feel for each other makes them want to be alone, and to be very close in an act called mating, or sexual intercourse. When they lie close together in a loving embrace, the father's penis becomes erect and can fit into the mother's vagina. Then, if some sperm cells leave the father's penis, they can swim along the vagina in the semen, and can enter the uterus, and swim into the tubes.

²³Martin O. Lerrigo and Helen Southard, *A Story About You* (Chicago, American Medical Association, 1962)

Parental love: The love that brings mothers and fathers together when they marry and have children is one of the finest things in the world. Because of this love, they do everything they can to take care of you and your brothers and sisters, and to make a happy home for all of you.

Female anatomy: A narrow passage called the vagina connects the uterus with the outside of the body. The outside opening of the vagina is between the legs where it is protected by folds of skin and flesh. The body's opening for passing urine is in front of it, and the opening for bowel movements is some distance in back of it.

Girls and women have ovaries, a uterus, and a vagina. Boys and men do not have these parts of the body.

Male anatomy: When the sperm cells leave the testicles, they go into the part of the body called the penis. It is in front of the testicles, and is shaped something like a thumb. When a baby boy is born, he already has testicles and a penis. Girls and women do not have these parts of the body.

Erection and seminal emission: During these teen-age years, it may happen that a boy's penis becomes stiff and erect, and semen is discharged from it unexpectedly. Sometimes this happens at night while he is asleep. This is called a seminal emission. It is a natural thing to happen, and is just part of the changes that take place during the years when a boy is becoming a man. The ability of the penis to become stiff and erect is important, because a father's penis can fit into a mother's vagina and send out the sperm cells only when it is erect.

These examples are not intended to provide a comprehensive view of content in human sexuality, nor are they recommended as answers appropriate to all classes of fifth-graders. These excerpts do, however, provide an example of an acceptable style and tone for the presentation of content on human sexuality in the upper elementary grades.

IV. The Heart of the Matter

During the preschool and primary years the child develops a diffuse background of attitudes related to human sexuality. The child at this age probably gives little conscious thought to such specific matters as sexual intercourse. Many children remain ignorant of this act for all or a good part of these early years. However, many of the child's experiences still have important effects. The concern or lack of concern for modesty among members of his family, their attitude toward his instances of genital play, and their attitude toward sex-related words he may use are but a few of the many possible examples. During the upper elementary years children become increasingly concerned with many of the specific erotic aspects of human sexuality. For the majority of the girls and many of the boys, the physical evidence of their developing sexuality arouses natural curiosity about kissing, caressing, petting, and the sex act itself. Many of the boys become concerned about

nocturnal emissions and masturbation. Even among the late-maturing pupils, considerable interest develops in these things as a result of their growing knowledge of the full implications of the adult sex role. Although there is considerable merit in covering these topics in a systematic manner through use of films, readings, and class discussion, this "shot-gun" coverage will always leave some individual questions unanswered. These questions must be asked before they can be answered; eliciting these questions is a challenging task.

- Concept:* The sex drive is an innate and powerful force which is related to human pleasure and reproduction.
- Pupils:* Developed for sixth-grade pupils of average socio-economic status; generally recommended for grades 4 through 6.
- Techniques:* The question box and related techniques.

The question box is perhaps the most widely used device for soliciting questions of a personal nature. The basic mechanics of this device are extremely simple. A slot is cut in a small wooden or cardboard box. This "ballot-type" box is placed in some accessible place in the classroom and children are encouraged to write questions of interest and place them unsigned in the box. This is indeed a simple procedure, and there are certain important ways to increase its effectiveness.

Emotional Environment. Like most other teaching procedures, the value of the question-box technique depends directly on the existence of good rapport between teacher and pupils. The use of the question box is no substitute for the difficult and thoughtful measures required to develop a climate of trust and freedom of expression within the classroom. If this does not exist, then little will be gained by use of this device. The truly meaningful questions will not be asked. If it does, then it will provide a useful complement to other important aspects of the family living unit.

Classroom Acceptance. One common characteristic of effective sex education programs is their natural acceptance as part of the regular school curriculum. Within the self-contained elementary school classroom, the teacher should normally avoid treating sex education and the procedures and techniques used in its presentation as something special. The question box is no exception. It is best not to install it in the classroom as a special adjunct to the family-living unit. Children also have personal questions to ask on other health topics; physical growth, cigarette smoking, and parental drinking problems are examples of other topics with potential for personal questions. Ideally, the question box should be established in the classroom at the beginning of the school year and be made available for questions on any topic.

Organizing the Questions. Advanced screening and planning is the key to the smooth handling of the questions submitted. Sometime prior to the health lesson the teacher should read the questions carefully and organize them. Some of the questions may fit logically into the content that is already scheduled for presentation. These questions might be best answered within the context of regularly planned activities. Others might be more appropriately answered during future presentations. If no more than two or three days are involved, then it would probably be best to wait until they can blend naturally into the program. Others that are related to content already covered or to content not normally included in the yearly program can be answered in a special presentation, usually at the beginning or the end of the regular health lesson. Occasionally pupils will submit questions designed to be needlessly "shocking" or obscene. The motivation for such questions often results from an "I-dare-you" attitude within peer groups or from simple curiosity concerning the teacher's reaction. Very often the teacher can revise the terminology and provide useful answers to these questions of doubtful sincerity. Extreme examples in this category sometimes must be ignored completely. Although this step may sometimes be necessary, it should not be taken lightly, for these questions often represent the outward manifestations of serious concerns that the pupil cannot express in any other way.

The Answers. Many of the questions of a particularly sensitive or technical nature probably should be answered directly by the teacher in conventional style. However, others related to content previously covered or information already in the possession of many of the children should be directed to the class. Many of these lead to fruitful discussions that sometimes range into other sensitive areas of importance.

ALTERNATE TECHNIQUES

The question box is just one of several possible techniques available for stimulating meaningful questions. The technique or techniques most appropriate for a particular class depend both on individual teaching styles and on the characteristics of the individual class and situation.

The Personal Essay. The assignment of an essay on topics related to family living or human sexuality can have many advantages. The pupils are provided with the opportunity to give some quiet and thoughtful consideration to important issues and to organize their ideas into some logical order. If the assignment is made near the end of the family-living unit, then many accurate facts and wholesome concepts may be reinforced in the process of writing them down. These papers also provide a rich source of information for the teacher in her

efforts to familiarize herself with the values, concerns, and patterns of thought characteristic of her pupils. The careful reading of these papers will often reveal important personal problems that call for private consultation with the child involved. These papers may also reveal widespread misconceptions or concerns that merit the use of class time for specific attention to these topics.

Some examples of promising topics follow:

"The Kind of Teen-ager I Hope to Be"

"The Kind of Parent I Hope to Be"

"The Way Boys Should Act Toward Girls" (Boys)

"The Way Girls Should Act Toward Boys" (Girls)

The mechanical details of the assignment, attention to spelling and handwriting, and so on, should be treated as they might be in a typical assignment in language arts. The opportunity for correlating the essay with the regular activities of this area is obvious.

Personal Guidance. Children often wish to discuss questions that they feel are embarrassing with an adult whom they consider knowledgeable and sympathetic. Although the parents would seem to be the logical ones for them to approach, it has been observed that children quite often feel the need to discuss sensitive matters with someone outside their immediate family. The reasons for this are complex and not well established; however, this preference is found among children who have a good relationship with their parents as well as among those who do not. The classroom teacher can provide a valuable service by taking the few simple steps necessary to function effectively in this role.

Beyond the basic need for good rapport is the need to be available. Generally, the normal school routine requires or encourages the teacher to be at his desk for thirty minutes or so before and after the regular hours of class. This provides an opportunity for individuals or small groups of pupils to present personal problems. To be really available, a teacher must be a good listener. This means, among other things remaining alert for serious concerns that are camouflaged by a frivolous or indirect approach. It is well to regard every question as important until proved otherwise. When a serious discussion materializes, the teacher should obtain as much information as is practical, assess the emotional tone of the child, and make a judgment as to the disposition of the matter. It may be obvious that a little information and support is all that is needed. Other cases may be serious enough to merit some continued attention. A good approach for these is to tell the pupil, "Be sure and let me know if this keeps worrying you." Occasionally, a problem will be encountered that requires referral to appropriate agencies or personnel. Some medical problems as well as

such things as sexual molestations and unduly severe parental punishment fall in this latter category.

Resource Persons. The use of resource persons in any area of the health curriculum has obvious value in terms of the special expertise such persons may bring to the classroom. One additional advantage is that children may ask questions of a comparative outsider that they are reluctant to ask their own teacher. Generally, the reverse is true; children will ask those with whom they are most familiar. But in some cases pupils show the same reticence toward discussing some personal matter with their teacher that they show with their parents. Other pupils may simply respond better to the particular approach that a school nurse, physician, or other resource person might adopt. Sometimes these questions are asked in the open classroom; in other cases these individuals are approached privately if they are available. It is well to recognize this particular role of the resource person and remain alert for any opportunity to make such persons available to one's pupils.

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11

Human Sexuality: Secondary Level

In the eyes of most parents and teachers, the young person becomes an adolescent when he begins his secondary school career. As applied to individual cases, this assumption may often be inaccurate. However, as a basis for decisions applied to large groups it is quite valid to equate the junior and senior high school period with adolescence. In the area of health education the study of the adolescent period as a physical and cultural phenomenon is particularly valuable as a source of meaningful implications for the instructional program.

Stress and Storm

Adolescence is traditionally, and rather accurately, characterized as a period of stress during which the young person often makes things difficult for both himself and those around him as he struggles with a unique set of problems. He may want more pocket money, greater freedom in his use of leisure time, less responsibility for household chores, and far less parental involvement in his personal affairs. Although individual patterns of adolescent concerns will often appear hectic and random, they will generally be found to be related to the basic task of achieving independent adult status. The problem of developing a mature sex role lies right at the heart of this task, and it is the sexual aspect of the adolescent's over-all development

that often presents the most difficulties. Television, movies, his peer group, and his observations of people in general provide information stressing the importance of properly managing one's sexual concerns, yet none of these sources provides very reliable or comprehensive guidance as to what he should do to handle problems in this area. Meanwhile the process of physiological maturity adds increasing urgency to the situation without providing useful insights into what behavior to adopt.

Even under the best circumstances, adolescent sexuality is fraught with difficult problems. In our society sexual maturity in a physiological sense normally occurs long before any socially acceptable outlet becomes available. Premarital sex on the part of school-age youth is regarded as immoral or dangerous by the majority of our citizens. Masturbation is deemed immature and undesirably introverted. Much of the sex drive is undoubtedly channeled into other activities, but it seems neither practical nor even desirable to handle the entire problem in this manner. These very real concerns are often seriously compounded by an artificial one. We seem determined to deny the adolescent any effective information or guidance concerning sexual behavior. Early in life his parents may provide him with a monetary allowance and guidelines for its use. He may find that he can discuss his personal financial affairs with his parents and receive useful advice. He may discuss academic and vocational problems with school guidance personnel with good prospects of receiving meaningful help. But if he should try the same sources for advice concerning his sexual problems, he will receive advice, but very often it will not deal forthrightly with his real concerns. He may find that both he and the parent or other adult advising him may evade the real issues. They may both find themselves participating in what has often been called a "conspiracy of silence."

Educational Needs

This pessimistic view admittedly does an injustice to many enlightened parents and effective guidance counselors. However, too often the pessimistic view is the accurate one. The present state of affairs is discouraging, but present trends are encouraging. Many factors are contributing to a new spirit of openness and full communication. The many newly emerging programs of education in family living and human sexuality at the secondary level are both a result of and a contributor to this new point of view. We now recognize that effective mass instruction in this area can both prevent many individual problems from developing and render others easier to manage. Beyond this lies the very real possibility of doing something in a positive way in the improvement of society's general attitude about sexual matters. Many health educators find this line of reasoning easy to accept in theory but difficult to put into practice. Although some of the difficulties are unusual, the process of developing a good program is similar to that of other topical areas in that the identification of specific needs is the first step.

Biological Information. Despite the recent emphasis on the interpersonal and behavioral aspects of sexuality, basic information pertaining to the structure and function of the reproductive system and the development of secondary sex characteristics still represent an important element of the program. Many of the serious concerns of adolescents pertain to the normalcy of certain physiological events, such as menstrual irregularities, untimely erections, markedly small or large genital organs, and so on. Basic information of this nature should have been covered in the upper elementary grades. If this is the case, then the stage will be set for an effective review in greater detail at the junior high school level. In some districts children at the elementary level may receive only superficial menstrual education for girls only. In these situations biological information should be provided at the secondary level as soon as possible.

The Sex Drive. A blending of biological and psychosocial concepts is essential to an effective understanding of the sex drive. Adolescents need some knowledge of the different forms it generally takes in the male and female. Within the male it is more specific and direct. It tends to be isolated from feelings of love and affection and directed more toward orgasm. Within the female the sex drive is more diffuse and is related to feelings of affection. Indirect stimuli such as sexual fantasies and provocative pictures have a much greater effect on the male than the female. For both sexes the intensity and mode of expression is affected by a wide variety of forces, including parental attitudes, religious teachings, general social values as depicted in the mass media, and the particular views and practices of one's close associates. A good program will give the adolescent an opportunity to explore these general points and to see how broadly they apply, what form they take in specific situations, and how to apply such information to personal decisions.

The Sex Roles. The way one manages and expresses the sex drive constitutes only one category of a large group of behaviors that make up the sex role. The clothes one wears, the way one talks, the jokes one tells or enjoys, the emotions one exhibits are generally influenced by what society deems appropriate for one's sex. Some of these differences are unimportant and others are under attack as part of the modern trend toward a reduction of sexual differences. However, young people are still keenly interested in manly and womanly qualities. Their development toward adult maturity in its best sense will be enhanced by the opportunity to examine and evaluate those many specific attitudes, values, and competencies that mark one as essentially masculine or feminine.

Marriage, Family, and Parenthood. The question of how much content pertaining to marriage and family living to incorporate into the high school curriculum is a difficult one. The need for and interest in matters that are frankly sexual is virtually universal among secondary school youth. However, interest and concern in the specific event of marriage and the prospects

of parenthood vary considerably among individual students. Within a typical twelfth-grade class where this type of information is commonly taught, the large majority of the boys and most of the college-bound girls will view marriage as something in the dim, distant future. But in the same class a few of the girls will be sporting engagement rings and occasionally a student or two will already be married. The grouping of students into college-preparatory and vocational tracts provides only a partial solution to this situation. Moreover, very often homogeneous grouping procedures are not applied to health education classes.

Although the problem of differing needs merits serious consideration when content, activities and assignments are planned, it does not present an insurmountable obstacle. Courtship and mate selection is an area of study that has value even to those in the relatively early stages of dating behavior. It can provide a degree of perspective for the better interpretation of their present endeavors of a less serious nature. For those at the other extreme who are already committed to marriage, this somewhat belated information can make them alert to possible trouble spots in their total relationship with their spouse-to-be. A consideration of the factors that contribute to family harmony and possible procedures for resolving conflicts may not be of immediate value to those with no serious marriage plans; however, these individuals will at least become aware that such a body of information exists and seek it out once again when a real interest occurs. In these and other ways, the content of this important area can serve the needs of a variety of individuals.

INSTRUCTIONAL APPROACH

Are the facts and concepts we are teaching accurate? Are they relevant? Are they consistent with community attitudes and values? Are the teachers well trained? We hear such questions more often in conjunction with sex education than with any other health topic. They represent legitimate and serious concerns but concerns which should apply to any other aspect of health education worth teaching. There is growing recognition that sex education should be handled in an effective but routine manner. The application of this generalization will be apparent in some of the specific aspects presented in this section.

Place in the Curriculum. The practice of offering family-living and sex education as separate courses is quite commonly advocated, even though this arrangement does not appear to offer a sound approach to the problem at the present time. Where this pattern is followed we generally find either a comprehensive semester course that reaches only a minority of the student body or a single short unit that is somehow inserted into the crowded secondary school curriculum. A joint committee representing the nation's school boards and administrators recently called attention to the impracticality of offering separate courses for every important health topic and also pointed

to some specific reasons for avoiding this practice with respect to family-living and sex education.

Including sex and family life education with the other categorical health topics in one sound, interrelated, and sequential program not only saves time in an already-crowded curriculum but assures that all topics will be part of a long-range program and will receive more complete and detailed consideration at the appropriate level of the student's development.¹

In addition to these advantages, the possibilities of correlating content with such related areas of mental health and growth and development is enhanced by retaining family living and sex education within the regular health education program.

Administrative Arrangements At the secondary level there is even less justification for segregating the sexes for sex education than there is at the elementary level. Unfortunately, students are commonly separated for health education at this level because of the traditional relationship between health and physical education. Therefore, teachers must be trained to teach in either type of situation. The teacher of sex education should possess a sound and wholesome personality, a good knowledge of content and method, and a teaching schedule that permits adequate preparation time for planning class activities. These are, once again, the minimum requirements for teaching any subject.

Timing and Sequence. A review of the better secondary school curriculum guides and the curriculum recommendations of authoritative bodies commonly reveals a balanced approach with both biological and psychosocial content represented at both the junior and senior high school levels. Generally there is some content appropriate to each grade from each of the major subtopics such as growth and development, conception and birth, sex roles, sex drives, and family dynamics. However, it would probably not be wise to attempt to cover every subtopic every year. When the local curriculum pattern provides for some sex education every year, the recommended practice is to emphasize only one or two subtopics at each grade level to avoid duplication and fragmentation of subject matter. In a district where there is a strong program in the elementary grades, it might be appropriate to concentrate on "Life Within the Family" at the seventh-grade level, "Human Reproduction" (review in depth) at the eighth-grade level, and "Social Behavior," with emphasis on understanding and managing the sex drive, at the ninth-grade level. Here the goal would be to provide com-

¹Joint Committee of the National School Boards Association and the American Association of School Administrators, "Health Education and Sex/Family Life Education," *Journal of Health, Physical Education, and Recreation*, Vol. 39, No. 5, May, 1968, p. 16

prehensive coverage within the three junior high years through use of concentrated and meaningful units.

In well-organized programs we usually find recapitulation of the major subtopics at each school level. However, there are important changes in content emphasis and sophistication. The study of family structure and dynamics at the junior high level normally focuses on the student as an adolescent child in the family of his parents, whereas at the senior high level the emphasis is on the student's potential role as a spouse and parent. In the biological realm the junior high curriculum commonly seeks to provide a sound understanding of pubescent changes and the significance of one's newly acquired sexual capabilities. In senior high the concentration is often on the uterine life of the child and the birth process itself. In the social-emotional area we often find emphasis on the basic mechanics of dating behavior and some general consideration of desirable manly and womanly qualities in junior high, whereas senior high students are provided with an opportunity to examine the deeper meaning of affection and love.

The Teacher's Approach. The same considerations with respect to the teacher's attitude or emotional tone that were presented in Chapter 10 also apply to the secondary school teacher. Basically, the most desirable approach is to strive for a natural, matter-of-fact tone while avoiding excessive seriousness or joviality. Although the teacher's subject matter background should enable him to deal effectively with content appropriate to the grade level at which he is teaching, he should not feel compelled to combine the qualities of an obstetrician, psychiatrist, and sociologist. In this area, like many health areas, no one has all the answers and every teacher must learn responsible ways of dealing with questions for which he is not prepared.

Suggested Concepts

The following concepts are presented in an effort to illustrate the general scope of family-living and sex education as an area of study at the secondary level. They are based on a review of several sources.² Like any other such general list, they should be evaluated carefully in the light of local needs and conditions prior to any possible incorporation into specific programs.

1. *Adolescent dating activities and other heterosexual social activities typically serve important functions in the process of personality development. Properly controlled social activities during the adolescent period can drain off*

²Most helpful were "Growth Patterns and Sex Education," *The Journal of School Health*, Vol. XXXVII, No. 5a, May, 1967; *Health Concepts: Guides for Health Instruction*, American Association for Health, Physical Education and Recreation, 1967; *School Health Education Study, Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press, 1967).

a certain degree of sexual energy in a useful way, thus rendering the sex drive easier to manage. Beyond this immediate need, social skills are developed which may serve the individual throughout life.

2. *Proper expression and control of the sex drive contributes to one's general well-being.* The satisfaction of the sex drive either by direct or indirect means involves behavior which may range from extremely detrimental to extremely beneficial in its over-all effect on one's total living satisfaction.

3. *Love and affection are complex human emotions which require substantial living experience for their full understanding.* Love and affection in their best form involve a high degree of genuine concern for the happiness and well-being of another person which transcends personal considerations. Considerable experience and maturity are required to produce the personal qualities this process requires.

4. *The selection of a marriage partner is a crucial step which has important effects on the lives of the husband, wife, and future offspring.* When a marriage endures, the close personal interaction involved may provide the opportunity for deep human satisfaction or pose the threat of emotional impoverishment and distress. The dissolution of a marriage often produces adverse personality changes in the members involved.

5. *Sexual adjustment and responsiveness within marriage is influenced by a wide variety of premarital and postmarital factors.* The sexual relationship affects and is affected by other aspects of the total relationship of the couple involved. Past experiences of a sexual nature, whether direct or indirect, can exert a strongly positive or negative effect on the quality of sexual expression within marriage.

6. *Many factors affect the over-all quality and effectiveness of the marriage relationship.* The development of mutual goals, the compatibility of personality traits, agreement on responsibilities and prerogatives, the effectiveness of personal communication are but a few of those having important effects.

7. *Parenthood may provide an opportunity for emotional enrichment or the potential for the severe disruption of marriage life.* The responsibility of providing for the physical, social, and emotional needs of a child, if met successfully, becomes a maturing and satisfying experience. The reciprocal relationship between parent and child carries the potential for either mutual satisfaction or distress.

8. *The developing human being requires substantial medical supervision during its prenatal life, delivery, and neonatal period.* Although the process of uterine development, birth, and early infancy may proceed in a normal fashion with little or no medical help, there are special health needs and special threats to health associated with these events. These risks can be greatly reduced by proper care.

9. *Human beings require extensive parental care and attention throughout infancy and childhood if they are to achieve optimum development.* The

human infant is one of the most helpless of all living things; it needs constant physical care for its survival. Children require a favorable psychological and sociological environment if they are to develop effective human qualities.

10. *Persons who do not marry often make adjustments which enable them to live productive and satisfying lives.* Although the family is the normative mode of satisfying many important human needs, these needs are often successfully met in other ways.

Suggested Teaching Techniques

In the secondary school curriculum as in the elementary school curriculum certain topics in the family-living and sex education area are essentially biological in nature. Prominent examples include basic reproductive anatomy, prenatal development, and birth. These topics lend themselves to teacher-centered techniques, with emphasis on overhead transparencies, films, and readings of various types. Where resources are available some laboratory experiences, such as examination of animal embryos and fetuses, can be very useful. Within this general portion of the curriculum the teaching task should focus on the transmission of accurate information; the development of attitudes and values play a secondary role.

Other topics with a psychosocial emphasis such as those pertaining to the sex drive, sex roles, dating and courtship behavior, and basic dynamics of family living necessarily involve considerable examination and evaluation of different patterns of behavior. It is perhaps unfortunate that in this sensitive area of the curriculum, where young people need the most help, health teachers find that there is less solid information. When questions arise, such as, "How much intimacy is permissible between dating high school couples?" or, "Should mothers work when their children are still in infancy?" there are seldom "correct" answers available that may be universally applied. For these and a host of other questions students must eventually work out answers that are right for them as individuals. Regardless of what the school does, they will somehow find answers and make choices. If no process is available for making a conscious choice, they may simply drift into a behavior pattern in a thoughtless fashion.

Student-centered techniques are considered to be highly useful when topics heavily weighted with value judgments and attitude formations are involved. Here young people need guidance more than instruction. For this reason buzz sessions, sociodramas, and symposiums are commonly chosen. These techniques provide students with the opportunity to express ideas, beliefs, and points of view that they may hold with varying degrees of commitment. Where mature guidance is available, this material can receive constructive criticism from the peer group, with the chance of producing favorable changes in the values and attitudes of all those participating.

PRACTICAL APPLICATIONS: SECONDARY LEVEL

In this section examples of workable techniques and general approaches to the teaching of content related to *four specific concepts* will be presented.

1. The Rules of the Game

A young adolescent's entry into the difficulties of dating and other activities with the opposite sex can be a difficult experience for both parent and child. In one sense, their objectives and expectations for this enterprise are similar; both the adolescent and his parents want him to develop social competencies that will contribute to his over-all adjustment and maturity. However, when it becomes necessary to spell out just what these goals mean and what specific types of experiences are needed to achieve them, the agreement ends. The parent emphasizes the development of skills that will lead to successful courtship and marriage at some future time; the adolescent emphasizes "cool" (or whatever the current term may be) and the development of skills for future adventures. The adolescent lacks the long-range view of the parent, and the parent lacks understanding of the importance of current modes of behavior within adolescent society. The disagreements are most apparent between individual parents and their teen-age children when specific issues are involved. Very often groups of parents or groups of teen-agers can collectively develop and express much more reasonable views than can individuals. This example calls for the development of a code of behavior for dating among junior high students.

Concept: Adolescent dating activities and other heterosexual social activities typically serve important functions in the process of personality development.

Students: This example was developed for eighth-grade coed students with average academic ability and socio-economic status, however, with modifications it may be applied to any secondary grade.

Technique: Committee work.

One of the immediate objectives of any unit on teen-age dating is to encourage the acceptance of reasonable standards of behavior for social activities of various kinds. These standards will be much more acceptable to adolescents if they are developed by their peers rather than imposed upon them by adults. Therefore, it becomes quite logical to select a group of mature students who have some status among their age mates and to provide them with the opportunity to work seriously on this task. A project of this type could be conducted within a single classroom group or throughout all the health classes of a particular grade level; in an activity that goes beyond the concept of a classroom teaching technique, a school-wide committee can be used. The follow-

ing suggestions illustrate one generally useful approach at the classroom level:

1. The committee should be appointed and started early in the unit that includes a study of dating procedures, but not before some introductory information on this topic has been presented. Students need to get some idea of the scope of the topic before they are asked to volunteer for a project related to it; an early start is needed if the committee is to finish its work and report to the class before the end of the unit.

2. Two of the most common ways to establish a committee of this type are (a) teacher selection from among those who volunteer and (b) a classroom election. Both procedures have their advantages and disadvantages, the choice should be determined by local factors. In any case, work for the selection of committee members who are generally popular with their classmates, reasonable in their judgment, and relatively mature in their social development. Although it will seldom be possible to have every committee member meet these criteria, they represent practical goals for the collective nature of the committee.

3. Four to eight students usually represent the best committee size for effective work; membership should be divided equally among the sexes.

4. The committee should receive some help in arranging its meetings. In some modern schools these meetings might take place during class time in special conference rooms that adjoin the classroom or form part of the library complex. Homeroom or activity periods are often a good possibility; some groups may decide to meet in the classroom before or after school.

5. The first order of business should be the election of a chairman and, in most cases, a recording secretary. The next step consists of outlining the scope of their assignment, that is, spelling out specifically what they plan to accomplish. Typical subtopics for their report might include acceptable age ranges for dating, activities while on dates, days of the week and times of the day, transportation arrangements, dating patterns (going steady, double dating, and so on), and the parent's role in supervision and chaperoning.

6. Once the task is accurately defined, a plan for gathering pertinent information needs to be established. The committee should secure some guidance from the teacher for this task. Appropriate sources include (a) magazine articles, (b) booklets designed for the teen-ager, (c) interviews with parents, (d) interviews of older students, (e) surveys of peer opinion, (f) a review of similar codes of other schools.

7. Once the committee has gathered its information it should prepare a report for presentation to the class. During this presentation the

report should be thoroughly discussed; also modifications when needed should be made on the basis of majority opinion.

8. Further use of the resulting code should depend upon its quality and the nature of the school situation in which it was developed. Even if the project terminates with the class report, the students will have benefited a good deal through their participation in its development. Other possible uses would include its presentation to other classes for their consideration or to a student government group as a possible stimulus for school-wide action on this issue.

11. What's Going on Around Here?

The ninth-grade year is one of the more hectic for many students insofar as heterosexual adjustment is concerned. Many of the more mature girls will be dating very regularly and once in a while one will be engaged or think she is engaged. At the other end of the scale, many of the late-maturing boys will have had no dates and will be showing little concern about the situation. In between these extremes we find boys and girls at all stages of social development, many of whom are very greatly concerned about this phase of their life. As adults we know that most of these "worriers" are worrying unduly about behavior that is perfectly normal for their age but that a small minority do indeed have genuine problems that may have a detrimental effect on their total pattern of life. Classroom learning activities can do little for the really serious cases of arrested social development that have taken on pathological overtones; however, a good program can do much to prevent borderline cases from worsening and can do much to improve the adjustment of the "low-normals." Activities which provide the adolescent with some degree of perspective as to the various patterns of social behavior exhibited by his age mates can often do much to reduce his anxiety. In this example, ninth-graders accomplish this with a well-conducted survey of their classmate's social and recreational activities within their family and with their peers.

- Concept.* Proper expression and control of the sex drive contributes to one's general well-being.
- Students:* Developed for ninth-grade coed classes of average academic and socioeconomic status, recommended for grades 9 through 12.
- Technique:* Student survey.

Polls and surveys are viewed with considerable suspicion by the general public and this suspicion is often well founded. A careful examination of the procedures used in many surveys and the conclusions drawn show that this poor reputation is often deserved. But this negative feature actually presents a strong argument for providing young

people with some actual experience in the use of this much abused device. Through their attempts to conduct a survey they will have the opportunity to become aware of the limitations in the type of information that this technique can provide. Also, they may develop an understanding of the careful procedures are needed to conduct a survey properly and thus learn to distinguish between surveys conducted by trained researchers as opposed to those conducted or sponsored by advertising agencies.

The first step in the conduct of any survey is the selection of the type of information to be gathered. In the present example we are dealing with social maturity and adjustment, with emphasis on heterosexual activities and their substitutes. Typical subcategories to survey might include such behavior as (1) extent and nature of one's solitary activities, (2) extent and nature of social activities within one's family, (3) extent and nature of activities with one's friends of the same sex, (4) incidental or informal activities with the opposite sex, (5) extent and nature of one's dating activities. The task of the student surveyors is to devise tightly worded questions to solicit information from within these general categories. The teacher's role in guiding this project consists of helping the students use the best possible procedures within the practical limitations of their situation and leading the students toward a cautious interpretation of their findings in accordance with these limitations. Both of these tasks are highly important to the validity of this type of learning experience. The following are some specific recommendations as to how they might be accomplished:

1. Because the quality of the learning experience for the total classroom group depends in large part upon the effectiveness of those particular students engaged in the project, this activity is quite properly restricted to the more capable students. Four to six students would seem to be about the right number to provide enough manpower for the committee without making it unwieldy.

2. The committee's first task should consist of searching the library for any possible information about (a) the results of similar studies conducted by trained researchers and (b) examples or descriptions of surveying procedures. The sources in the latter category can provide help in the form of both good survey questions and ideas for the selection of methods and techniques for the conduct of the survey.

3. Following a review of this information, the committee's next step is the construction of an interview form. Such a form generally consists of a one- or two-page list of questions with appropriate spaces for recording the answers. These questions would normally be based on the basic behavior categories described—that is, solitary activities, family activities, and so on. After the interview form has been devised, each member of the committee should try it out on two or three subjects

and then meet again to compare their results and make any revisions necessary to improve the clarity of the questions.

4. Next plan how many subjects will be interviewed and who they shall be. Ten to fifteen subjects is a reasonable number for each member to interview. Thus an average-sized group can cover from forty to sixty subjects. Use some random system for selecting subjects. One method would involve assigning every ninth-grader a number and then selecting the subjects by a lottery-type procedure. Another simple procedure that is acceptable for this type of project is to select every tenth or every twentieth student from a list of the total class. Advise the investigators to conduct the actual interviews in private or semiprivate to minimize the number of "show-off" answers.

5. After the interviews have been completed, the committee should tabulate the results and prepare a report to the class. In the report the highlights of the findings should be presented in a conversational style of delivery; also, any interesting comparisons with other studies found during their library work should be reported. A long recital of percentages should be avoided. Use statistics only when needed to support generalizations or conclusions.

6. During the class discussion following the report, the teacher usually should guide the class toward a cautious interpretation of the results. Encourage the point of view that "this information can give a general idea of the social activities of our students, but remember that it is even difficult for professional investigators to establish specific facts and trends." It is also generally a good idea to call attention to diversity or variability in the results if these are present. Realization of the wide range of "normal" behavior can serve to provide reassurance to many adolescents who are concerned with the appropriateness of their social pattern.

III. Love and/or Sex?

Individuals have experiences. Out of these may come certain general guides to behavior—values—which tend to give direction to life.³

Most communities these days recognize the school's responsibility to provide young people with basic information concerning human reproduction. However, there is far less agreement concerning the school's role with respect to sexual attitudes and behavior patterns. Most professional educators and the large majority of our general citizenry feel that it is inappropriate for teachers to "moralize," that is, to attempt the direct indoctrination of specific ethical positions. In any but the most ideologically homogeneous communities, this

³Louis E. Raths, Merrill Harmin, and Sidney B. Simon, "Helping Children to Clarify Values," *NEA Journal*, Vol. 56, No. 7, October, 1967, p. 12.

practice can readily lead to undesirable conflicts between the teachers' version of morality and those of individual families. Even if complete agreement could somehow be achieved, the practice of "moralizing" can produce indifference or possibly a "behavioral backlash" on the part of students who often hear too much preaching from too many sources. Although most teachers know that they should not moralize, many of them do and maintain that they are teaching values rather than morals. They feel that somehow the use of different terminology makes their actions more acceptable. This practice is perhaps even more damaging to the real spirit of education than that of the outright offenders.

In matters of sexuality as with other areas of human conduct, the teacher's primary task is to help young people identify and evaluate their personal values. This should naturally lead to some modifying of old values and formulating of new ones; however, the teachers should place emphasis on the *process* of value development, not the *content* of the resulting values. Values, by definition, involve an emotional element and this factor is particularly strong when dealing with such topics as sexual activity and love. The approach presented in this example shows one way that adolescents might be provided with an opportunity to clarify their feelings and understandings in this sensitive area.

- Concept:** Love and affection are complex human emotions which require substantial living experience for their full understanding.
- Students:** Developed for eleventh-grade coed classes with average to above-average academic ability; recommended for average and above-average twelfth-graders also.
- Technique:** Critical reading.

The concept of love and its relationship to sexual intercourse and lesser degrees of sexual activity are topics that textbooks (even special supplements and booklets) generally do not cover thoroughly or convincingly. For material bearing on these topics many health teachers have turned to good novelists or those authorities in the behavioral sciences with an appealing writing style. One good example of a selection that many senior high schoolers could profitably read is found in the following excerpt from Erich Fromm's well-known work *The Art of Loving*.

ERICH FROMM ON LOVE AND SEX

Line

- Sexual desire aims at fusion—and is by no means only a physical
 2 appetite, the relief of a painful tension. But sexual desire can be stim-

ulated by the anxiety of aloneness, by the wish to conquer or be conquered, by vanity, by the wish to hurt and even to destroy, as much as it can be stimulated by love. It seems that sexual desire can easily blend with and be stimulated by any strong emotion, of which love is only one. Because sexual desire is in the minds of most people coupled with the idea of love, they are easily misled to conclude that they love each other when they want each other physically. Love can inspire the wish for sexual union; in this case the physical relationship is lacking in greediness, in a wish to conquer or to be conquered, but is blended with tenderness. If the desire for physical union is not stimulated by love, if erotic love is not also brotherly love, it never leads to union in more than an orgiastic, transitory sense. Sexual attraction creates, for the moment, the illusion of union, yet without love this "union" leaves strangers as far apart as they were before—sometimes it makes them ashamed of each other, or even makes them hate each other, because when the illusion has gone they feel their estrangement even more markedly than before. Tenderness is by no means, as Freud believed, a sublimation of the sexual instinct; it is the direct outcome of brotherly love, and exists in physical as well as in non-physical forms of love.⁴

There are several acceptable procedures for handling the details of this type of assignment. The following are some general suggestions that apply to most situations.

1. Usually the most practical way to bring this type of material to students is by use of a duplicating process. This procedure is routinely followed by teachers in many fields even though it is in technical violation of copyright laws. Those who wish to avoid the risk this involves may write the publisher for written permission covering the use of the desired material. Some school libraries make classroom sets of paperback novels available or place several copies on reserve, thereby making them accessible to large numbers of students.

2. Appropriate preparation is essential if the class is to react constructively to the type of material presented in this example. Ideally, these eleventh-graders would have developed a factual background in human sexuality as a result of a comprehensive program beginning at the elementary level. In any event, this type of material is best presented toward the end of teaching units on human sexuality in classes where good class morale and rapport with the teacher prevails.

3. A class with a good background could profitably discuss this material in a "spot situation," wherein the excerpt is simply distributed and discussed after they have had a few moments to read it. However, the quality of the learning experience would be greatly improved by providing more extensive preparation for the class discussion. A more

⁴Erich Fromm, *The Art of Loving* (New York: Harper, 1956), pp. 54-55

ambitious procedure would involve (a) distributing the excerpts as homework during the class meeting preceding the discussion, (b) beginning with buzz groups on the day of the discussion (see pp. 128-129), and (c) discussing the excerpt with the total class after the buzz session.

4. The task of discussion leadership in this instance varies little from that of similar discussions involving textbook material. Some general recommendations follow:

- a. The teacher should open the discussion by soliciting comments of a general nature on the most interesting or provocative points of the excerpt. Examples of workable lead-ins are, "Do you agree with Fromm's basic point of view?" or, "What points seem most accurate or truthful about this material?"
- b. The teacher should be ready to bring up specific points for discussion after the students have had a chance to discuss the items of high interest. Also be prepared for questions about terms and concepts the students may not understand, for example, Fromm's *brotherly love*, Freud's *sublimation*, or the phrase *orgiastic, transitory sense*.
- c. Toward the end of the planned discussion it would be well to lead the class toward a consensus on the main points; during this process care must be taken to protect the rights of those with minority views.

IV. Marriage Hollywood Style

One of the factors that is often regarded as being responsible for hasty and ill-advised marriages is the so-called myth of romantic love. Although young people are often warned against placing undue emphasis on this factor during courtship, they seldom have an opportunity to examine the specific reasons which support this point of view. One way to meet this particular educational need is to analyze carefully some common examples of romantic love as found in the mass media. This can be done with popular novels, romance magazines, and television dramas. The example here happens to deal with movies.

Concept: Many factors affect the over-all quality and effectiveness of the marriage relationship.

Students: Developed for twelfth-grade coed students with average academic ability and socioeconomic status; also recommended for eleventh grade.

Technique: Committee work.

The example described here was first suggested in a special edition of the *Journal of School Health*. The recommendations were as follows:

Appoint a committee to analyze the last ten movies seen by any of the members in terms of the following:

- a. number of instances in which the hero or heroine fell in love at first sight,
- b. number of instances in which couples in love behaved in a manner which they would consider appropriate,
- c. number of instances in which couples in love behaved in a manner which their parents would consider appropriate,
- d. number of instances in which couples contemplating marriage would, in the committee's judgment, be likely to have a happy marriage.

Ask the committee to discuss the criteria they used in making the judgments involved in the analyses.³

Although this activity would hold the interest of most senior high school groups regardless of their background in family-living and sex education, it would be a particularly useful experience for groups that had a reasonably good background in family-living topics. Adolescents who had had previous opportunities in the classroom to deal with the concept of love (as in example III, pp. 238-240) and to struggle with the distinction between infatuation and genuine love could, in discussing item (a), apply what they had learned to specific situations in the films. Items (b) and (c) refer to behavior during dating and courtship and would provide particularly good discussion material for classroom groups who grappled with such tasks as the problem of establishing dating standards as in example I (pp. 233-235). The key to good discussion leadership as applied to these items would be to get down to the real reasons for terming behavior appropriate or inappropriate. For example, "Why is a certain type of behavior inadvisable?" "What type of harmful consequences might occur?" "How does the risk compare with the favorable outcomes that might result?" This would be more useful than merely comparing the conduct observed with arbitrary standards.

Of the four subtopics listed, item (d) offers the best opportunities for bringing a greater proportion of "firm evidence" as opposed to value judgments into discussion. Considerably more scientific investigation has been directed toward identifying the factors related to successful marriages than toward determining appropriate dating behavior. Although this is certainly not the type of problem that lends itself to scientific proof, there is some solid ground to serve as a starting point. Blood and Wolfe,⁴ for instance, have identified nine areas in which significant disagreements often occur between husbands and wives, specifically,

³"Growth Patterns and Sex Education," *Journal of School Health*, Vol. XXXVII, No. 5a, May, 1967, pp. 117-18.

⁴Robert O. Blood, Jr., and Donald M. Wolfe, *Husbands and Wives: The Dynamics of Married Living* (New York: Free Press, 1960), p. 247.

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|-----------------|--------------|
| 1. Money. | 6. Roles. |
| 2. Children. | 7. Religion. |
| 3. Recreation. | 8. Politics. |
| 4. Personality. | 9. Sex. |
| 5. In-laws. | |

In the discussions of the film couples, these nine factors could serve quite well as a means of structuring the discussion. Did the prospective spouses have any opportunity to become acquainted with each other's views concerning these areas? In which areas might there be disagreements? How serious might these disagreements be?

Although the example here deals with commercial movies, the same general format could be applied to other media. In many situations classroom films, television dramas, short stories, and novels or excerpts from novels would serve quite well. The opportunities for occasional correlation with English classes should also be kept in mind. Very often the same novel is assigned to total grade levels, or several sections in one grade level, thus providing many students with a common assignment that might be profitably discussed in a family-living or human-sexuality unit during the health class.

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12

Alcohol Education: Elementary Level

Textbooks in teacher education generally attempt to avoid extreme positions on controversial issues within the professional community. Unfortunately, the wide diversity of opinion among health educators and other related professionals on the topic of alcohol education makes this difficult. Philosophy and practices are moving from the traditional abstinence orientation to one more in keeping with modern developments in the behavioral sciences. When this new approach is truly embraced, the implications for both content emphasis and methodology lead to a radical departure from the traditional view. It is only fair to warn the reader that the authors of this text strongly favor the new approach that appears to be emerging from this controversy. However, the authors feel that all health educators should examine this issue carefully to ensure that their personal views are consistent and well founded.

PUBLIC ATTITUDES

Because public schools tend to reflect the attitudes and values of the community as much or more than do most social institutions, it is not surprising that health teachers exhibit a good deal of ambivalence toward beverage alcohol. Throughout the history of the nation, little consensus has existed with regard to this topic; this schism appears to exist both be-

tween different persons and within the personality of the individual himself. It is interesting to examine the possible factors that led to the development of this state of affairs.

Wets Versus Drys

The term *alcohol* carries predominately negative connotations for most Americans. It often evokes thoughts of drunkenness, alcoholism, automobile accidents, family disruptions, or teenage delinquencies. In the mass media, alcohol-related problems are given considerable, and at times disproportionate, attention. Except for the obviously biased and hedonistic appeals of the advertisers, the average citizen hears little that is good about alcohol, yet he continues to drink. A gradually increasing majority of Americans report that they use alcohol.¹ Although scientific investigations of the effects of alcohol on the living effectiveness of the moderate drinkers, as opposed to the abuser, are exceedingly scarce, the common statement that 90 per cent or more of the users are not adversely affected by their association with this beverage seems reasonable.² Recently, modest support has appeared for the point of view that alcohol enriches the life of many of its users. Yet although millions of Americans have experienced no apparent harm and possibly even tangible benefits from their drinking, our average citizen has been aptly described as one who "drinks wet" but "thinks dry."

The Silent Majority

The basic reasons for the ambivalence that Americans generally manifest toward beverage alcohol are exceedingly complex. At the risk of considerable oversimplification, they can be summarized with the statement that a society with the same need for some readily available tension-reducing substance that virtually every present or past society has exhibited was subjected to one of the most enthusiastic and well-organized temperance movements in history. Several volumes have been written in an effort to record and interpret this significant historical phenomenon properly.³ Although different versions conflict on many points, there is general agreement concerning the force and potency of the American temperance movement. Bacon describes the classical dry philosophy which emerged from this movement as the only well-defined position concerning beverage alcohol ever developed in the United States, and one which still exerts a strong influence on American thought.⁴ The "classical wet" philosophy was

¹Oon Cahalan and Ira H. Cisin, "American Drinking Practices," *Quarterly Journal of Studies on Alcohol*, Vol 29, March, 1968, pp. 130-51.

²Morris E. Chafetz, *Liquor: The Servant of Man* (Boston: Little, Brown, 1965).

³For thorough accounts of the temperance movement see Henry Welsh Lee, *How Dry We Were: Prohibition Revisited*, (Englewood Cliffs, N.J.: Prentice-Hall, 1963), or Andrew Sinclair, *Prohibition: The Era of Excess* (Boston: Atlantic Monthly Press, 1967).

formulated mainly by those with an economic stake in the alcoholic-beverage industry and consisted of little more than irrational denials of the equally irrational "dry" position. The average person was understandably reluctant to endorse either of these extremes; consequently, he tended to give little serious thought to the matter. He then became part of the vast silent majority that Bacon terms the "unaligned avoiders."

CURRENT SCHOOL PROGRAMS

Abstinence Orientation

In the years since the repeal of Prohibition there has been some erosion of the strength of the temperance philosophy throughout our larger society. However, in the smaller arena of the school, there has been little evidence of decline. Even though many of the original state laws of the nineteenth century mandating instruction on the "evil and deleterious" effects of tobacco and alcohol have been modified, there has been little change in the spirit of their implementation. The school's efforts have been for the most part quite thoroughly abstinence oriented.⁵ This emphasis on abstinence has generally resulted in a heavy preoccupation with the problems related to the use of alcohol and a consequent neglect of objective information concerning alcoholic beverages and the sociocultural aspects of their use. Little attention is generally given to the topic of moderate drinking. As one observer describes it, "The moderate drinker [is] allowed on stage only as an apprentice alcoholic or as a heedless tempter of his weaker brother."⁶ This point of view leads to programs consisting largely of content focused on one single aspect of the student's life, namely, his basic choice to drink or abstain. They provide little information of value to the potential social drinker, who needs practical information if he is to avoid the hazards inherent in the use of alcohol.

Typical Patterns

A few health teachers no doubt still adhere to the "militant dry" position, particularly in sections of the country where this constitutes the majority position among the local populace. These teachers do not disguise their attempt to draw students into the ranks of the life-long abstainers. But there are at least two other, more common patterns that produce the same results in a less forthright fashion. The holders of the first position pay lip service to the right of each individual student to make his own decision; they then

⁵Selden D. Bacon, "Education on Alcohol: A Background Statement," *Alcohol Education Proceedings of a Conference*, U.S. Department of Health, Education, and Welfare, March, 1966.

⁶Hilma Unterberger and Lena DiCicco, "Alcohol Education Re-Evaluated," *National Association of Secondary School Principals Bulletin*, Vol. 52, March, 1968, p. 15.

⁷Joseph C. Furnes, *The Life and Times of the Late Demon Rum* (New York: Putnam, 1965), p. 344.

proceed to place disproportionate, if not complete, emphasis on the problems associated with drinking. They say, "Make up your own mind, but remember that drinkers often jeopardize their marriages, kill people with guns and automobiles, become alcoholics and develop delirium tremens." This is often called the make-up-your-own-mind-but-don't drink approach.

A second common position is not really directed toward abstinence; however, it manages to move in that direction without active guidance. Teachers adopting this position are not opposed to moderate drinking per se, they simply wish to avoid the complexities and controversies involved in handling moderate drinking as a classroom topic. These sticky problems are effectively circumvented by dwelling exclusively on alcoholism, a safe topic upon which everyone can agree. Their approach is commonly termed *alcoholism education* rather than *alcohol education*.

Although these approaches differ somewhat in their expressed philosophy and ultimate goals, they are similar in the basic way they are perceived by the student. Directly or indirectly, someone is telling him that alcohol has nothing to offer except problems; that those who drink are exhibiting some sort of personal weakness, either in their inability to resist social pressure or to face up to their problems without some sort of chemical crutch; that those who drink realize no positive benefits and expose themselves to any number of hazards. It is not hard to imagine the student enduring all this, then taking a look at the world around him and wondering, "Why do so many people drink? Do they enjoy it? If so, why? Does alcohol serve any useful function? Does the pattern of use differ much among individual drinkers? Are there ways to minimize the risks associated with drinking?"

The student may speculate about these questions, but if he wants to search for answers, he will probably have to find his own sources of information. The odds are against such questions being effectively discussed in modern classrooms.

MOUNTING CRITICISM

In recent years many professionals working in fields related to the specific problem of alcoholism have grown increasingly dissatisfied with the irrational or apathetic attitude exhibited by the general public toward alcohol-related problems. They characterize this reaction as one which alternates between passive indifference and misguided emotionalism, with either response constituting a serious obstacle to the implementation of constructive programs. Moreover, school health educators with abstinence- or temperance-orientated teachings are often viewed as one of the main factors perpetuating these detrimental attitudes.

A Drinking Society

What is wrong with the educational efforts of those persons committed to a temperance philosophy? There are several points on which it might be

criticized, but one disenchanted investigator⁷ manages to sum up the main problem in two short sentences. "Their program is simple and vivid. The only trouble with it is that it does not take into account the fact that the majority of Americans drink." This point seems well taken, for within the United States few social phenomena have shown such a consistent and stable pattern as has the use of alcohol. Although the popularity of specific types of alcoholic beverages has varied from generation to generation, the average consumption in terms of absolute alcohol has remained virtually the same. Americans consumed 2.10 gallons of alcohol for each person aged fifteen years or over in 1850, 2.15 gallons in 1900, 2.04 gallons in 1950, and 2.07 gallons in 1960.⁸

Although the per capita consumption is fairly easy to compute, it is considerably more difficult to determine who is drinking all this alcohol. The first serious attempt to assess the pattern of use with American society was made in 1947; at that time it was found that 65 per cent of a nationwide sample used alcohol.⁹ Recently, a similar study placed 68 per cent of our population in the user's category.¹⁰ Once again a very consistent pattern is shown. A review of the subcategories within this latter study shows that the adult population can be roughly divided into three major groups of approximately equal size. These are abstainers; occasional drinkers, who drink less than once per week; and regular drinkers, who drink at least once per week.

The general pattern shown by objective studies of alcohol use is one of balance and consistency; however, it would be a gross exaggeration to say that the nature and extent of alcohol use in the United States has not varied. Within the broad and stable pattern of per capita consumption, there has been an historic decline in the consumption of distilled spirits and a corresponding rise in the consumption of beer and wine and increases are apparent in the percentage of women and teen-agers that use alcohol. Although these trends merit attention for their specific implications, the overriding consideration is that we live in a society that accepts the moderate use of alcohol.

Minimal Influence

As is the case with most educational enterprises, it is very difficult to assess accurately the long-term effects of abstinence-oriented programs on the behavior of the students. It is only fair to say that some reinforcement of commitments probably occurs among those whose home and/or religion

⁷Albert D. Ullman, *To Know the Difference* (New York: St. Martin's, 1969), p. 223.

⁸Raymond G. McCarthy, *Alcohol Education for Classroom and Community* (New York: McGraw-Hill, 1964), p. 133.

⁹J. W. Riley and C. F. Marden, "The Social Pattern of Alcoholic Drinking," *Quarterly Journal of Studies on Alcohol*, Vol. 8, 1947, pp. 265-78.

¹⁰Cahalan and Cisari, *op. cit.*, p. 136.

influenced them to abstain.¹¹ Some students may be undecided on whether to use alcohol and others may be on the verge of alcohol abuse. In these cases, a reasonable presentation of the consequences might have a decisively favorable effect.¹² But for the most part the educational efforts of the school have had little apparent effect on the very things they seem designed to accomplish, namely, influencing students to abstain. As noted previously, American drinking patterns have remained remarkably stable for a century or more, whereas educational efforts both within the school and in the larger society have varied considerably in their intensity. There appears to be considerable truth in the statement "that values surrounding drinking and embedded in drinking patterns are primarily shaped by experiences in the family and in peer groups rather than by formal educational agencies."¹³ Those who accept his assumption feel that it would be much more realistic to direct educational efforts at *helping the individual operate more intelligently within the framework of his basic choice to drink or abstain.*

Possible Harm

Although many authorities feel that present programs fail to meet the needs of the large majority of young people, others view the consequences as being much more serious. In their well-regarded text, *Alcoholism and Society*, Chafetz and Demone¹⁴ came to this conclusion following a review of several cross-cultural studies. They felt that the results supported the view that, "Cultures which preach prohibition are likely to create unhealthy attitudes about drinking which contribute to alcoholism."¹⁵ They draw particular attention to the extremely low rate of alcoholism among American Jews, who generally condone moderate drinking and place considerable value on the intelligent control of one's intake, as compared with the relatively high rate of alcoholism among Protestants, who violate the principles of their particular sect in order to drink. There seems to be some tendency among those who have been taught that all drinking is essentially evil to view excessive drinking as being little different from moderate drinking.

This point of view is consistent with studies which show that teen-age drinking taking place in communities where an abstinence philosophy pre-

¹¹Bacon, op. cit., p. 12.

¹²Godfrey Hochbaum, "How Can We Teach Adolescents About Smoking, Drinking, and Drug Abuse?" *Journal of Health, Physical Education and Recreation*, Vol. 38, No. 8, October 1968, p. 38

¹³Edwin M. Lemert, "Alcohol, Values and Social Control," in David J. Pittman and Charles R. Snyder, (eds.), *Society, Culture, and Drinking Patterns* (New York: Wiley, 1962), p. 583

¹⁴Morris E. Chafetz and Harold W. Demone, Jr., *Alcoholism and Society* (New York: Oxford University Press, 1982)

¹⁵Ibid. p. 182.

vails tend to be more abusive than that reported elsewhere.¹⁶ Other preliminary research findings concerned with addictive drinking patterns also conform to this pattern. These show a disproportionate number of alcoholics among persons whose first drinking experience took place in circumstances typical of those who drink without family approval. This drinking specifically took place (1) at a later age, (2) in the company of nonfamily members, and (3) in a place other than the home or a public establishment.¹⁷

SOME POSITIVE ALTERNATIVES

It is easy to criticize, one might say, but what about some positive suggestions? Perhaps the most comprehensive and thoughtfully prepared recommendations have been put forth by the Cooperative Commission on the study of Alcoholism in its recent report.¹⁸ Financed by a grant from the National Institute of Mental Health, the commission was able to recruit a highly qualified panel of experts for an in-depth study of alcohol-related problems. Even though its study was focused on alcoholism and related problems, many of its recommendations merit consideration as guiding principles for any program of alcohol education. Those that seem particularly relevant are presented here, together with interpretive comments by the authors:

1. "*Reduce the emotionalism associated with alcoholic beverages.*"¹⁹ The tendency to portray alcohol as possessing highly positive or negative qualities should be discouraged. Its presence is not a guarantee that one's party will be a success, nor does its use inevitably lead to inappropriate or dangerous behavior. Less distinction should be made between drinkers and nondrinkers at social gatherings. Guests at social functions should not be pressured to drink. A "take it or leave it" attitude should prevail.

2. "*Clarify and emphasize the distinctions between acceptable drinking and unacceptable drinking.*"²⁰ Although the traditional distinction between drinkers and nondrinkers should be minimized, the line between acceptable and unacceptable drinking patterns should be more clearly drawn. This recommendation takes into account one of the fundamental criticisms of an abstinence culture wherein the individual is strictly on his own once he moves into the ranks of the users. If any drinking is viewed as evil, whether it be one drink or twenty drinks, there is little guidance or motivation toward moderation.

¹⁶Gerald Globetti, "The Use of Beverage Alcohol by Youth in an Abstinence Setting," *Journal of School Health* Vol. 39, No. 3, March, 1969, pp. 179-82.

¹⁷Albert O. Ullman, "First Drinking Experience as Related to Age and Sex," in David J. Pittman and Charles R. Snyder (eds.), *Society, Culture and Drinking Patterns* (New York, Wiley, 1962), p. 282.

¹⁸Cooperative Commission on the Study of Alcoholism, *Alcohol Problems. A Report to the Nation* (New York, Oxford University Press, 1967).

¹⁹Ibid., p. 138.

²⁰Ibid., p. 142.

3. "Discourage drinking for its own sake and encourage the integration of drinking with other activities."²¹ If drunkenness is appropriate anyplace, then it is probably more appropriate in a barroom than at the dinner table or in a bowling alley. Drinking that takes place within the context of social and recreational activities tends to be controlled by built-in restraints. Laws that restrict drinking to such narrowly designated places as bars and taverns tend to encourage unhealthy drinking patterns.

4. "Assist young people to adapt themselves realistically to a predominantly 'drinking' society."²² Reduce the legal drinking age to eighteen years, because the common standard of twenty-one years is largely unenforceable and encourages clandestine teen-age drinking under conditions lacking social restraints. Create situations wherein teen-agers may become acquainted with alcohol in adult-supervised activities. Provide meaningful and realistic instructions regarding alcohol both in the home and in the school. Emphasize objectivity and free discussion during this instruction.

It is impossible to capture the full force and meaning of this significant report in this brief overview. We perhaps do it an injustice by presenting some of its more controversial items somewhat out of context. It is only fair to say that in the full report very telling arguments are put forth for its specific recommendations. One point should be kept clearly in mind by those who attempt to interpret and evaluate its content. Its intent is to reduce alcohol-related problems; it was developed and written by men who were fully cognizant of the human misery that alcohol abuse can cause. Although its recommendations are quite liberal in effect, they are not designed to protect the average citizen's right to drink, but simply to encourage him to stop perpetuating a system that turns susceptible people into problem drinkers and alcoholics. Effective programs of school health education have much to contribute to this worthwhile goal.

THE ROLE OF THE SCHOOL

The importance of alcoholism and other alcohol-related problems in American society is well known. Conservative estimates place the number of alcoholics somewhere around 5 million. This alone would constitute a significant public health problem even without consideration of such related problems as auto fatalities, crime, family disorganization, and economic loss. Decisions concerning appropriate individual and community actions in regard to alcohol often involve consideration of complex physiological, emotional, and social factors. The knowledge needed for this task requires a systematic educational program for its acquisition. Moreover, young people need opportunities to form attitudes and clarify values in educational environments which permit free discussion of all the issues. The school

²¹Ibid., p. 146

²²Ibid., p. 148

seems to be the only resource with the potential to meet such needs. For these reasons alcohol education merits attention as a priority area of content within school programs of health education.

Universal Need

Too often instruction on alcohol topics becomes too narrowly focused on the potential abuser. All students have important educational needs with respect to alcohol regardless of their present or future patterns of use or nonuse. The needs of regular users or potentially regular users are obvious. The infrequent drinker needs knowledge to offset his inexperience which may produce relatively higher degrees of risk during his occasional periods of use. Knowledge provides the abstainer with the basis for the development of constructive attitudes toward users with whom he comes in contact. Finally, a commonly overlooked factor is the need of all citizens for knowledge if they are to discharge intelligently their community responsibilities pertaining to the support of constructive legislation and programs for the prevention and control of alcohol abuse.

Objective and Comprehensive Instruction

Any comprehensive program of alcohol education must give due attention to the frequency and intensity of the problems related to alcohol. This may involve the presentation of material that will provide an emotional impact. However, the purpose of any such presentation must be to inform the student, not to threaten him. The use of content, materials, or activities designed primarily to produce fear or guilt reactions would have no place in any educational program, even if it did discourage alcohol abuse, which it does not. Speculation on the real effects of such experiences range from mere avoidance or rejection of the teacher's efforts, through the possible development of damaging conflicts with parental attitudes, to the possible encouragement of personal practices of alcohol abuse. A comprehensive program must also give due attention to the fact that millions of persons drink without apparent harm. The two thirds or so of one's students who will no doubt seek to join these millions need useful information if they are to drink intelligently. The remaining potential abstainers need to examine their attitudes and practices so that they can learn to abstain without becoming unduly defensive about their own position or antagonistic toward users with whom they come in contact.

OVERVIEW FOR THE ELEMENTARY LEVEL

Most children become aware of alcoholic beverages at an early age. This awareness comes to many as they observe the drinking habits of their parents. It is not unusual for parents that use alcohol to allow the children in the home to taste these beverages occasionally as a means of satisfying their curiosity. In a few homes children are permitted watered down wine or

some mild equivalent on a fairly regular basis. Even in the homes of abstaining parents, the ever-present television set brings informatioo about alcohol to viewers of all ages.

Throughout all of this incidental exposure the information that children acquire is sometimes charged with emotion and sometimes quite matter of fact. Nevertheless, the child takes all this in and begins the process of forming concepts and values with regard to these significant phenomena. This process takes place for the most part in a relatively placid manner; to the average elementary school child, the issue of alcohol is largely a hypothetical one. Unlike the secoodary school youth, the elementary school child is seldom exposed to situations which involve the temptation for alcohol abuse. Although he does not become very emotional about alcohol, he is interested in this substance and ready to learn. Unfortunatoely this learning generally takes place in a hit-and-miss fashion, with little effective guidance provided by teachers or parents. Most elementary schools fail to include the study of alcohol in their curricula and parents often find that alcohol, like sex, is a topic that is difficult to discuss with their children.

It seems logical to assume that children should have access to accurate facts and mature guidance as they begin to form concepts concerning the use of alcohol. The School Health Education Study is one of the few sources which offer specific recommendations for teaching this topic at the elementary level. Among the behavioral objectives it provides for their first progression level, which is normally comparable to the primary grades, two apply specifically to alcohol. These are the following:

- *Is aware* that there are differences between alcoholic beverages and other beverages.
- *Realizes* there are differences in family practices and feelings about use of tobacco and of alcoholic beverages.²³

These modest objectives seem very appropriate for the primary grades. They call for the acquisition of knowledge that is both useful to the young child and within his capacity to understand. For the second progression level, which is normally comparable to the upper elementary grades, two of the behavioral objectives that are particularly relevant to the topic of alcohol are the following:

- *Differentiates* among controls on purchase, possession, and use of substances that modify mood and behavior.
- *Illustrates* how, when, and where certain mood and behavior-modifying substances are used for dietary, ceremonial, social, pain relieving, and other reasons.²⁴

²³ School Health Education Study, *Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn. 3M Education Press, 1967). pp. 86-87. Reprinted by permission.

²⁴ *Ibid.*, p. 86.

Although some progression is evident when these are compared with the objectives for level I, these objectives also deal with things that are generally nontechnical and within the average child's realm of experience. Most elementary children become aware of the fact that minors are not allowed to purchase alcoholic beverages or consume them in public establishments. They know that for some people, special occasions call for the use of alcohol and that social drinking takes different forms among different groups. All in all, the objectives seem directed toward a basic familiarization with the various ways alcohol is commonly used in our society. The emphasis is on customs, preferences, restrictions, and so on; a consideration of the technical or pharmacological aspects is quite properly reserved for the secondary level.

Suggested Concepts

The following concepts are presented in an effort to express the authors' views concerning the proper scope of a program of alcohol education at the elementary level. They constitute six of a total of sixteen concepts that were developed following a review of several sources.²⁵ The remaining ten concepts were deemed more appropriate for the secondary level and are presented on pp. 264-266. Each concept, in effect, describes an area of study which would require many specific learning experiences for its full development. They should, of course, be reviewed and modified to meet local needs if their incorporation into specific programs is contemplated.

1. *Beverage alcohol is a single well-defined substance normally resulting from the fermentation of grains and fruits; it is the only ingredient of alcoholic beverages which produces significant effects on the nervous system.* Although alcoholic beverages vary considerably in their taste, smell, and appearance, they all have intoxicating qualities. This intoxicating potential is almost entirely determined by the proportion of pure alcohol present in the beverage.

2. *Beverage alcohol functions principally as a depressant to the nervous system.* Although persons who have been drinking sometimes become more active, this occurs because they have become less concerned about their actions. Alcohol temporarily slows down most bodily activities and reduces one's sensory and motor efficiency.

3. *Individual attitudes and practices regarding beverages alcohol are affected by a wide variety of social and cultural factors.* The nature of one's home life in terms of religion, ethnic tradition, and parental attitudes; the public attitude of one's community; the norms of one's peer group; and the specific

²⁵Most helpful were *Health Concepts Guides for Health Instruction*, American Association for Health, Physical Education and Recreation, 1967; *School Health Education Study*, op. cit.

characteristics of one's personality all affect one's concept of alcohol.

4. *Many persons use beverage alcohol intelligently for pleasure and enjoyment with no ill effects.* Although the many problems related to alcohol use are serious and widely publicized, the large majority of users avoid these problems through the exercise of mature judgment and control.

5. *The behavior of individuals during periods of alcohol abuse often produces a variety of personal and social problems.* The presence of alcohol tends to increase the difficulties inherent in situations where there are physical hazards, as in operating an automobile or power machinery of any kind and in situations where there is emotional stress, as in family arguments or personality conflicts.

6. *Alcoholism is a disease condition which renders an individual incapable of controlling his drinking and exposes him to the consequences of frequent abuse.* A small proportion of those who drink lose control because of their personal susceptibility and the circumstances surrounding their use of alcohol. These persons need considerable outside assistance if they are to recover.

Suggested Techniques

The educational needs of elementary school children with respect to alcohol are important; however, they are relatively limited in scope and consist largely of helping the young child view alcohol use in its proper relationship to other social activities. Therefore, much of the necessary content can be presented within the context of other health topics and other fields of study. A consideration of various beverages naturally arises in any study of nutrition, thus providing an opportunity to discuss the special features of those which contain alcohol. The materials used in teaching history or literature often contain references to the use of alcohol and thus provide natural lead-ins to the discussion of this substance. When alcohol education occurs in this manner, the particular techniques or learning activities are naturally determined by the requirements of the principal topic of study. In these situations alcohol content should be integrated into the larger topic as smoothly and unobtrusively as possible.

When alcohol-related content is presented directly as an independent topic at the elementary school level, such conventional techniques as reading, discussion, and simple visual aids are usually appropriate. Unless local conditions have produced the need for special emphasis, the more elaborate techniques, such as dramatizations, buzz sessions, resource speakers, are generally not necessary. Because the content recommendations for alcohol education at the elementary level are usually sociocultural in nature rather than technical or scientific, there is generally no great need for laboratory demonstrations or projects. However, local needs do vary and professional opinion concerning teaching this topic at the elementary level is in a state of flux; therefore, no technique should be ruled out arbitrarily.

PRACTICAL APPLICATIONS: ELEMENTARY LEVEL

In this section examples of workable techniques as related to two specific concepts will be presented. These examples are designed to illustrate a general tone or approach for this somewhat controversial topic as well as specific procedures for the presentation of content.

I. To Each His Own

Things that are different interest children. Alcoholic beverages and issues involving alcoholic beverages are generally treated as something special in most homes, regardless of the particular pattern of use or nonuse that prevails. When children become perceptive enough to detect the "different" status of beer, wine, whiskey, and so on, it is time for them to acquire the information that will keep this difference in proper perspective. In this teaching example the simple medium of still pictures is used to convey rudimentary information and help children develop the proper kind of respect for alcohol and for the rights of other persons whose attitudes and practices may differ from their own.

- Concept:** Beverage alcohol is a well-defined substance normally resulting from the fermentation of grains and fruits; it is the only ingredient of alcoholic beverages which produces significant effects on the nervous system.
- Pupils:** This example was designed for second-grade pupils of average socioeconomic and academic status; with slight modification it would be appropriate for grades K through 3.
- Techniques:** Still pictures combined with class discussion.

The correlation of alcohol content with other health topics can be a very effective procedure; however, particular care is needed to ensure that essential points are included and that coverage is accurate and complete. Nutrition units provide the opportunity to discuss beverages of all types. *One common device used in teaching nutrition is to ask children to find pictures of common food groups in old magazines which may then be mounted as posters or used in notebooks. On successive days the children might be asked to collect examples of meat dishes, casseroles, vegetables, desserts, and so on, so that the special features of each might be discussed. The following are some special recommendations for handling alcoholic beverages within this context:*

1. When the children are asked to search out pictures of commonly used beverages, emphasize the fact that they may select any type, whether the children feel it is nutritious or not. In a matter-of-fact way mention that, in addition to the milk and fruit juices that most

children drink at mealtime, it is all right to bring in examples of soft drinks and things that children do not use often, such as coffee, tea, beer, or wine. Ask each child to bring in one example and to try to think of two important things he can tell about the beverage he selects.

2. Prior to the next class meeting secure a skeleton set of properly mounted pictures from a classroom picture file or elsewhere. Be sure to include the alcoholic and nonnutritious items that the children may not select. This will ensure that all types will be available for the next day's discussion.

3. On the following day provide paste, construction paper, and crayons so that the pictures may be mounted and labeled. Also a simple border may be drawn in to display better the content of the picture. When this task has been completed, bring the children together in a circular formation or into some other arrangement that will permit them to view one another's work. Have the children hold up their pictures for a few moments so that the others may see and so that each child may have the satisfaction of displaying his efforts. At this time the teacher should make mental notes on the best examples available for discussion. Once this is accomplished, ask the children to turn in their pictures.

4. Select one picture from each basic category for discussion; give first priority to those examples prepared by the children, but fill in the gaps with the preselected "back-up" material. Begin the discussion for each item by calling on the child who prepared it to point out two things of importance. The discussion points for milk and fruit juices are simple, obvious, and generally well emphasized. Some suggested points to bring out for other nonalcoholic items are the following:

- a. Coffee and tea are not regularly used by children in most homes because they do not contain the food elements that milk can provide for the needs of growing children. They also sometimes interfere with sleep if taken near bedtime. Avoid telling children that these drinks will damage their bodies; this is not true.
- b. Carbonated beverages and other soft drinks are generally not used at meal times for the same reasons that apply to coffee and tea. Many families use them at picnics, parties, and on other occasions as treats. If they are used between meals it is well to rinse one's mouth to minimize the chance of tooth decay.

5. The discussion of alcoholic beverages should be generally directed toward the development of (a) a basic awareness of alcohol and the different forms of alcoholic beverages and (b) recognition and

acceptance of the different attitudes that different people have regarding alcohol. Some specific points follow.

- a. Alcohol is made by allowing sugary or starchy substances to ferment.
- b. Wine, beer, gin, whiskey, and so on, all have the same kind of alcohol in them, but some contain more than others.
- c. Many adults enjoy drinking these beverages for their flavor, to stimulate their appetite, or to help them relax.
- d. Because alcoholic beverages have little food value and because large amounts of these beverages can interfere with normal behavior, most parents do not allow children to use them. However, some parents let their children taste alcoholic drinks occasionally and a few let them use wine regularly with meals.
- e. There are many different opinions concerning the use of alcoholic beverages. Some people use them regularly, some just on special occasions, and others are opposed to any use of alcohol.

This example was designed for the average community, which can usually be expected to contain sizable groups of abstinent families, infrequent users, and regular users. In these circumstances the actual contact of second-graders with alcohol will probably be limited to an occasional taste of their parents' drinks, and only a few pupils will have this much contact with alcohol. These pupils may volunteer information concerning these experiences, and if they do, it should be treated in a normal manner. If one is teaching in a "dry" area, or in a predominantly Italian community, where the children may be drinking watered-down wine, then changes in the tone and emphasis of the discussion would be indicated.

II. The Good with the Bad

The basic job of any educator is to help people develop accurate and comprehensive impressions of those things which are relevant. Few people deny the relevance of alcohol use as a social issue, but the task of conveying a valid impression of this many-faceted topic is a challenging one. The difference in the way people view alcohol is illustrated by an "anonymous" writer in the following spoof.

If, when you say whiskey, you mean that brew, the poison spirit, the bloody monster that defiles innocence, dethrones reason, destroys the home and creates misery, poverty, yes, literally takes the bread from the mouths of little children—then I am certainly against it with all my heart.

But if when you say whiskey, you mean the oil of conversation, the philosophic wine, the ale consumed when good fellows get together, that puts a

song in their hearts and laughter on their lips, the warm glow of contentment in their eyes—then, I am certainly in favor of it.²⁴

Alcohol, of course, means both of these things; more commonly, it means something between these extremes, depending on how it is used. Children can begin to develop this broader view of alcohol use if they are provided with an opportunity to become acquainted with the many ways alcohol is used. In this example, magazine pictures are once again used to illustrate this general idea.

Concept: Many persons use alcohol intelligently for pleasure and enjoyment with no ill effects.

Pupils: This example was developed for use with fifth-grade pupils of average socioeconomic and academic status; however, it would be appropriate for most any classroom group from grades 4 through 6.

Technique: Bulletin-board displays.

This teaching example provides a description of how a bulletin-board display may be used to depict the various circumstances and consequences related to alcohol use and abuse. A typical display might be organized into four sections to show alcoholic beverages as an adjunct to sociability, a main ingredient of ceremonies, a contributing cause of auto accidents, and the focal point of alcoholism. Only situations with positive connotations would have to be displayed and discussed if the objectives were confined to the development of the preceding concept. However, inclusion of both negative and positive aspects provides an opportunity simultaneously to begin development of a concept of alcohol abuse and to forestall possible parental objections that might result if apparent benefits were discussed in isolation. As is the case with any health topic, specific procedures are affected by local conditions; the following recommendations should be generally useful:

1. The development of a classroom bulletin-board display can serve very well as the central activity of a unit on beverage alcohol at the elementary level; work on the display should get underway on the first day of the unit.

2. At the end of the first day's session, which normally covers introductory material, ask the children each to bring two pictures involving the use of alcohol. These will have to come largely from old magazines, although newspapers and leaflets or pamphlets sometimes also serve as good sources. If possible, each pair of pictures

²⁴Notes on Alcohol Education for Teachers, Bulletin 371 (Lansing, Mich.: Department of Education, 1967), p. 13

should contain one example of acceptable use of alcohol and one of alcohol abuse or the consequences of abuse. Allow at least two days for this search and remind the class of this obligation on each intervening day. As the pictures are brought in, immediately sort them into categories corresponding with the bulletin-board divisions.

3. Start work on the display by organizing the class into groups corresponding with the bulletin-board choices. Allow as much freedom of choice as possible; occasionally, abstinent parents may object if their child is forced to work on an assignment which depicts alcohol in a favorable light. Once the subgroups have been formed, one or two pupils from each should be selected to work on an oral report based on the same theme as their portion of the display—alcoholism, ceremonial use, and so on. These children may begin on this task immediately, probably starting with a trip to the library. The remaining portion of each group should begin planning the layout of their display.

4. The specific mechanics of the bulletin-board construction will necessarily vary according to the resources available and the training and background of the individual teacher. Probably the simplest procedure involves pasting the pictures on individual pieces of construction paper with captions applied by use of stencils and felt-tipped pens. The construction paper may be cut to a size and shape that most effectively accommodates the picture and caption. As the work gets under way, circulate from group to group to assist the children with their plans. The following are some basic hints to keep in mind:²⁷

- a. A good display should be *harmonious*, with appropriate combinations of objects, colors, lettering, and so on.
- b. Proper *contrast* is important if pictures, words, and so on, are to command attention.
- c. Direction or *emphasis* should be apparent; the eye should be guided to the central theme of the layout.
- d. An underlying *shape or pattern* is generally useful in organizing the picture and guiding the viewer's attention; "S" or "T" patterns are often used for this purpose.

Once the individual sections have started to take shape, some thought needs to be given to some method of tying the entire display together. This can usually be accomplished by deciding on a common style of lettering for the four section titles and using large letters for a major title for the total project.

5. During the health lesson following the completion of the display, the oral reports should be presented, these should be brief, factual, and

²⁷James W. Brown, Richard B. Lewis, and Fred F. Harclerod, *AV Instruction, Media and Methods* (New York: McGraw-Hill, 1969) pp. 410-11

often involve teen-age drinking:

- drinking an occasional beer or glass of wine at the family supper table.
- experimenting by getting high at a teen-age party
- drinking at a bar or tavern
- drinking at a beer party where there are only boys (or only girls)
- having a mixed drink at a family gathering¹

There is much that those students who are committed to the use of alcohol can learn about the advisability of drinking or not drinking in each of these specific situations. Most people would see nothing wrong in a sixteen-year-old having a glass of wine at the family dinner table, but what if one of his teen-age friends is present as a guest? Now the propriety of each minor's drinking is affected by the views of the guest's parents and, in many states, by legal factors. Suppose an abstinent girl discovers that her steady boy friend occasionally drinks at family gatherings. Does this mean that the relationship should be dissolved? Probably not, but what if he also utilizes a borrowed driver's license to drink in taverns? How should she interpret this? The appropriate response for these situations could not be determined without a consideration of much more information about the situations and persons involved; however, they serve to illustrate the types of problems that confront many teen-agers.

Prevailing Attitudes and Practices

The question of how many teen-agers have significant contact with alcohol is a difficult one to answer with any precision. However, several studies have been conducted recently which outline some general patterns quite effectively. The work of Maddox and McCall² seems particularly valuable in this regard. They found that the large majority of young people used alcohol on at least one occasion before graduation from high school. Also, a small but significant majority reported using alcohol with some regularity during their high school years. Most of their subjects reported that they received their first drink in the home in the presence of approving adults. With regard to the motives for teen-age drinking, Maddox and McCall saw little evidence of rebellion against authority or peer persuasion as the prime motive. They felt that the evidence strongly supported the view that teen-agers begin drinking as part of their normal efforts to assume adult roles. Although some "rebellious" drinking undoubtedly takes

¹U S. Department of Health, Education, and Welfare, *Thinking About Drinking*, Public Health Service Publication No 1683, Washington, D C., 1968, p 8

²George L. Maddox and B. C. McCall, *Drinking Among Teenagers: A Social Interpretation of Alcohol Use by High School Students* (New Brunswick, N.J.: Rutgers Center of Alcohol Studies, 1964).

place, the need to strike out against adult authority appears to be a motive of relatively minor importance.

While the analysis of Maddox and McCall seems quite appropriate for the majority of American communities, where social drinking is generally accepted, a somewhat different situation appears to prevail in those areas of high adult abstinence. Here fewer teen-agers drink but relatively more drink without parental approval. This, of course, restricts the number of potential abusers, but there are higher rates of alcohol-related problems and more evidence of unwholesome drinking patterns reported for this smaller group.³ In these communities peer influence appeared to be the immediate factor in motivating teen-agers toward use or abuse. It appears safe to assume that the urge to rebel against authority plays a larger role as a fundamental reason for youthful drinking in these instances. A cause-and-effect relationship between use of alcohol and antisocial behavior was not apparent, regardless of the cultural setting; however, alcohol abuse often seems to complicate and intensify destructive behavior prompted by other factors.

The widespread contact that many teenagers have with beverage alcohol either as direct users or as persons indirectly involved in drinking situations lends a sense of urgency to the need for a sound program of alcohol education. A brief consideration of the properties of the substance itself serves to increase this concern.

A Self-prescribed Drug

For the sake of an interesting discussion, consider this hypothetical situation. Assume for a moment that beverage alcohol had just been developed by the pharmaceutical industry. What use would our society make of it? How would it be controlled? Although most pharmacologists would hold that alcohol does not offer anything to the physician that cannot be better accomplished with other substances, at least one, Dr. William Dock,⁴ feels that it would play a useful role as a medical tool if it were advertised in the professional literature as vigorously as present-day drug discoveries. He describes the effects of alcohol in small doses as "a superb tranquilizer; in larger doses a good sedative; and in even larger doses, an effective anesthetic agent." And, one might add, it can be habit-forming and, if taken in overdose, lethal. The question of alcohol's medicinal value still remains unanswered; however, one thing seems clear, if it were discovered today, its sale as an over-the-counter drug would not be permitted. Many drugs with far milder effects and far less potential for harming the user have been restricted to use by prescription only.

³Gerald Globetti, "Social Adjustment of High School Students and Problem Drinking," *Journal of Alcohol Education*, Vol. 13, No. 2, Feb., 1967, pp. 21-39.

⁴William Dock, "The Clinical Value of Alcohol," in Salvatore Lucia (ed.), *Alcohol and Civilization* (New York: McGraw-Hill, 1963), pp. 75-86.

Alcohol is not, of course, a recent discovery; the circumstances surrounding this event remain buried in the past. It predates both recorded history and, with the possible exception of the family, the development of the usual agencies and organizations that society normally uses to control potentially dangerous substances. It has become so much a part of mankind's culture that no major government has successfully prohibited its use. As noted in Chapter 12, few social phenomena have shown as consistent and stable a pattern as has the use of beverage alcohol. In many sections of the country it is almost as readily available and widely used as aspirin tablets. Efforts to control the abuse of alcohol by making it more difficult to obtain appear to be impractical and probably undesirable. The real answer appears to lie in providing the public with the knowledge and understanding necessary for intelligent and constructive behavior with respect to its use.

EDUCATIONAL APPROACH

In view of alcohol's position as a potent substance that is readily available and frequently used, the task of alcohol education becomes both urgent and complex. Just as the physician needs a broad knowledge of the drugs he prescribes to his patients, the average citizen needs broad knowledge about the drug he is, in effect, prescribing for himself. Even those who abstain must help determine public policy concerning alcohol use, and it appears that there is much that could be improved in this regard also.

Suggested Concepts

The following concepts were developed after a review of the information presented in several sources.³ This list is not complete in itself, for it assumes both thorough teaching of the concepts provided for the elementary level on pp. 253-254 and further development of these elementary concepts at the secondary level. Although an attempt was made to formulate concepts of general usefulness, they should be reviewed carefully prior to any possible incorporation into local programs.

1. *The use of beverage alcohol is a relatively permanent and prominent feature of man's culture.* Alcoholic beverages have been used to a significant degree throughout American history despite the effort of many groups to reduce or eliminate their use; periodic studies of the percentage of users and the per capita consumption show an extremely consistent pattern.

2. *Individual patterns of alcohol use vary widely: however, the majority of those who drink use alcohol moderately.* Approximately one third of the American population abstains; of those who drink, roughly 90 per cent do so moderately, whereas the remaining 10 per cent exhibit a drinking pattern that often leads to serious problems.

³Most helpful were *Health Concepts. Guides for Health Instruction*, American Association for Health, Physical Education and Recreation, 1967; *School Health Education Study, Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press, 1967).

3. *Individual and group attitudes pertaining to beverage alcohol have important personal, social, and community consequences.* The effect of individual attitudes on practices is obvious; however, public opinion affects the conditions of individual use via the medium of formal and informal controls; by more subtle means, it affects emotional responses to alcohol in ways that may have positive or negative effects.

4. *There is no evidence that beverage alcohol causes significant damage to the tissue of those who use it moderately; the nature of its relationship to the common medical problems of the abuser is largely unknown.* Even during heavy intoxication, blood alcohol concentration rarely exceeds 0.4 per cent, an amount considered too low to produce structural damage to the body. Many chronic alcoholics develop severe medical conditions; however, dietary deficiencies and general health neglect appear to be significant factors in their development.

5. *The blood alcohol concentration of the user is determined largely by the amount ingested, the rate of ingestion, and the blood volume of the user.*⁶ Among other factors the presence or absence of food in the stomach is also quite significant; exercise, perspiration, and excretion seem to have little or no effect.

6. *The specific chemical effects of beverage alcohol vary according to the blood alcohol concentration and range from an insignificant effect, through mild tranquilization, to heavy intoxication.* In small amounts alcohol produces a reduction in emotional tension which is accompanied by a slight reduction in motor and sensory efficiency; in larger amounts, alcohol functions as a sedative, narcotic, or anesthetic, depending on the concentration.

7. *The effects of a given blood alcohol concentration on the behavior of the individual vary considerably because of the influence of a wide variety of situational and personality factors.* Although the basic pharmacological effects are relatively predictable, the emotional tone and voluntary behavior of a drinking person is determined in large part by such things as basic personality type, recent experiences during the days or hours before imbibing, and the mood and actions of others present in the drinking situation.

8. *The specific cause or causes of alcoholism are unknown; however, alcoholism often appears to result from the prolonged use of beverage alcohol as a means of reducing emotional tension.* Several theories have been advanced and investigated, yet there is still considerable disagreement as to basic causes. Factors of personal susceptibility and stressful circumstances seem to be essential to the development of this disease.

9. *Alcoholism can be successfully treated but the process frequently involves intensive social, psychological, and medical procedures.* Both the causes and consequences of alcoholism appear to involve a complex group of emotional, social, and physiological factors which interact in a unique way for

⁶Health Concepts: Guides for Health Instruction, op. cit., p. 11

each individual; the factors necessary to correct this condition are equally complex.

10. *The problems related to the abuse of beverage alcohol require both individual and community efforts for their prevention, control, and amelioration.* Each individual is responsible for his personal behavior in alcohol-related matters and for the encouragement of responsible behavior among members of his own family. On the community level, alcohol-related problems have many detrimental effects and require intelligent support of programs and legislation directed toward their control.

Suggested Techniques

The chemical, or physiological, aspects of alcohol use that the average person needs to know are relatively uncomplicated and can be presented by the more commonly used teaching techniques. Films, reading assignments, and general discussions can handle this content quite well. Some teachers use laboratory demonstrations involving the injection of animals with alcohol to provide a graphic illustration of alcohol effects. However, this procedure requires specialized skills and materials that are often not available.

A special word of caution is needed concerning printed matter of all types that are offered for use in alcohol education. Much of this material is heavily biased, usually in favor of temperance or abstinence. This criticism also applies to many health textbooks prepared for public school use. Unterberger and DiCicco, public health workers with an interest in school programs of alcohol education, recently stated that, "Health and biology textbooks commonly used in public schools today reflect little in the way of current scientific findings on the relationship of drinking to alcoholism and on other alcohol-related problem."¹ The extent to which individual teachers accept this somewhat blanket indictment will depend on their individual point of view and the requirements of their local situation; however, at the very least, it indicates a need for a critical review of any material related to this controversial topic before assigning it to one's class.

The psychosocial aspects of alcohol use are more difficult to present effectively. Such topics as the factors which affect people's attitudes and practices regarding alcohol, the distinction between acceptable and unacceptable drinking patterns, and the effects of community controls on individual use are important but nebulous. The techniques selected to develop this material should emphasize open discussion with generous time allotments. Other devices should be selected on the basis of their contribution to this basic need. Symposiums, buzz sessions, and socio-dramas are examples of techniques that are useful in this capacity. They

¹Hilma Unterberger and Lena DiCicco, "Alcohol Education Re-evaluated," *The Bulletin of the National Association of Secondary School Principals*, Vol. 52, No. 326, March, 1968, p. 12.

can be used to present information, raise issues, and develop interest in preparation for general discussion.

PRACTICAL APPLICATIONS: SECONDARY LEVEL

In this section examples of workable techniques and general approaches to the teaching of content related to four specific concepts will be presented. These examples will be evenly divided between the junior high school and senior high school levels.

I. A Little Perspective

A review of the facts reveals that alcoholic beverages rank next to water and milk in terms of widespread use. The people of virtually every age and country have both sung the praises of wine, or its equivalent, as a civilizing influence and cursed it as a cause of human misery. Even as one delves into the specific aspects of use and abuse, remarkable similarities still prevail. The benefits to be gained from a cross-cultural and historical study of alcohol use extend far beyond the mere satisfaction of learning that other countries and ages also have, or have had, their share of troubles; often, promising approaches to our modern problems can be found and dangerous patterns identified and avoided. In this example suggestions for introducing eighth-grade students to this type of study are provided; the learning activity described calls for compiling a series of individual reports into a class "book."

- Concept:* The use of beverage alcohol is a relatively permanent and prominent feature of man's culture.
- Students:* This example was designed for eighth-graders of average socioeconomic and academic status; with appropriate modifications it could be used throughout grades 7 through 12.
- Technique:* Written reports.

Written reports are perhaps one of the oldest forms of learning activities; however, in this example they are supplemented with a rather unique innovation. The students are asked to copy their reports on ditto masters; these are then duplicated, collated, and stapled to form "books" which are then distributed to each class member. One principal advantage of this technique is the additional motivation that it provides for each class member to do his best work. This pressure may be held to an optimum level by use of a tight format that tends to standardize the appearance of the reports while leaving room for creative expression within the designated structure. The following are some specific recommendations that apply to most situations:

1. This activity should be started early in the teaching unit. After

spending perhaps one class meeting on a general overview of the broad cultural significance of alcohol, the next meeting should be devoted to planning and initiating the assignment. After first providing a general overview, spell out some of the details as follows:

- a. Each report will be on the topic of drinking practices in either a particular country or a particular historical era.
- b. The length of the report will be limited to one printed or type-written page; the final draft is to be placed on a ditto master.
- c. Each paragraph of the report will cover a specific subtopic; these subtopics will be planned by the class.

As these directions are presented the students should be given an opportunity to suggest changes and alternatives. Some ambitious classes may not want to be limited to one page. Occasionally two or three precocious young typists may volunteer to type all the reports to provide a uniform appearance to the final product. The students may wish to establish an editing committee to prepare a title page, introduction, table of contents, and so on. Teachers fortunate enough to receive such suggestions should be flexible enough to accept them.

2. The next step consists of planning the general scope and content of the reports with the class. When time is short this information is best issued as instructions, but class involvement will produce better motivation and a better understanding of the assignment. In response to the question, "What historical periods should be represented in our book?" the brighter students should soon produce a standard breakdown, such as (a) prehistoric, (b) Biblical, (c) classical, (d) medieval, (e) renaissance, (f) colonial, and (g) modern. When asked about geographical representation, the typical class response will result in a roll call of the continents plus some special subclassifications such as Polynesia, England, the Arab countries, Israel, and so on. At this point solicit volunteers for the various historical periods and the representative countries. Once one country from each continent has been chosen, allow duplications—for example, Italy, France, and Sweden, for Europe; Japan, China, and India, for Asia.

3. The development of specifications for the internal organization of the individual reports also lends itself to teacher-student planning. Call for ideas but be ready to fill in the gaps with suggestions so that a comprehensive set of subcategories may be selected. A typical group might include (a) the most common forms of beverages used; (b) the categories of people that drink—for example, men, women, the young, and so on; (c) the drinking circumstances—for example, with meals, celebrations, and so on; (d) the problems that may exist; (e) the legal and other controls that are used. The need to list the sources of one's information should also be established.

4. The students should be encouraged to review a wide variety of sources in their search for the specified information. Some school libraries may have books on the cultural aspects of alcohol use, but these will be the exception rather than the rule. Much of the information will have to come from general texts on individual countries and historical periods. The *Reader's Guide to Periodic Literature* may list good magazine articles, and the always reliable encyclopedias will probably be one of the more valuable sources. Even a careful search will sometimes fail to provide a specific type of information for a particular country or era. This problem should be recognized and the students should be encouraged to compensate with an expansion of other sections of their report.

5. A ditto master should be issued to each student and some basic directions provided for its preparation. Legibility can be ensured by insisting that the reports be typed or printed with a ball-point pen. Show the student's how errors can be corrected and caution them to remove the protective tissue before beginning. The teacher may have to do the necessary duplicating; however, student volunteers can usually be found to do the collating and stapling.

6. Once the "books" are ready for distribution, the teacher should review the contents carefully for major errors and misrepresentations. Some of these may need to be pointed out in class, and the teacher may ask each student to make changes on his copy. Following this, the complete project should be read and discussed to emphasize the salient facts and generalizations.

II. Brother Rat Takes a Drink

The issue of alcohol tolerance or resistance to intoxication is one which provokes a great deal of confusion in the mind of the average citizen. Virtually anyone who has had any contact with alcohol use will commonly relate stories of "good old Joe" who can drink all night and not show it. Those who are truly knowledgeable in the ways of alcohol know that if Joe has really been drinking all night without showing it, then he probably has not tried to do anything more demanding than lift his glass to his mouth—a skill with which he is presumably quite familiar. A certain degree of physiological tolerance admittedly does exist; however, this effect is greatly exaggerated by a large portion of the public.

The relatively predictable effects of alcohol on individual levels of motor and sensory efficiency, as noted previously, can be effectively presented in conventional films, reading assignments, and discussion. But those fortunate enough to have access to the necessary equipment and supplies can illustrate this concept in dramatic fashion by use of laboratory animals.

Concept: The blood alcohol concentration of the user is determined largely by the amount ingested, the rate of ingestion, and the blood volume of the user.

Students: This example is recommended specifically for ninth-grade students of average socioeconomic and academic status; with appropriate modifications, it could be used with most classroom groups throughout the secondary level.

Technique: Laboratory demonstration.

One of the main ingredients necessary for the proper implementation of teaching procedures involving this concept is a basic knowledge of the dynamics of alcohol concentration in the blood. Teachers who do not feel sure of themselves on this topic should undertake a good review of the facts and principles involved. The important part of this type of lesson comes during the discussion that follows the demonstration when the teacher must help the class interpret the significance of the events that were observed. The laboratory materials constitute a second major need; if these are not available as part of the health teacher's instructional equipment, they can often be borrowed from the school's science department. The specific directions that follow were adapted from the work of Leon A. Greenberg (Rutgers Center of Alcohol Studies) by Frances Todd:⁴

Purposes

1. To show the effects of various concentrations of alcohol on the postural reflex, righting reflex, and corneal reflex.
2. To show the relationship between the presence of protein food in the stomach and the effects of alcohol.

Materials

1. Six white rats, matched as nearly as possible in size, sex, age, heredity, and weight, and identified by ear notches or other means
2. Hypodermic syringe, 5 cc
3. Hypodermic needle, no. 19
4. Stomach tubes (at least 4)
5. Small beaker
6. Alcohol (30 % solution)
7. Amino acid, such as glycine or glycol (NH₂, CH₂, C 8H₁₁)
8. Forceps (to pin mouth of rat)
9. Gloves (to prevent injury in case of biting)

⁴Frances Todd, *Teaching About Alcohol* (New York: McGraw-Hill, 1964), pp. 182-83.

10. Cotton
11. Scales (to weigh rats)

Procedure

Inject the 30 % solution into the peritoneal cavity of each of 6 rats which have had no food for 12 h. as follows:

Rat 1: 1 g alcohol per k of body weight

Rat 2: 2 g alcohol per k of body weight

Rat 3: 3 g alcohol per k of body weight

Rat 4: 4 g alcohol per k of body weight

Rat 5: 4 g alcohol per k of body weight, by tube

Rat 6: 4 cc glyocol solution by tube, and 4 g alcohol per k of body weight

Observations to be recorded for each rat

1. Postural reflex: staggering
2. Righting reflex: ability to right the body
3. Corneal reflex: blinking eyes when an object nears

Even in this small sample, a direct relationship will probably be observed between the amount of alcohol injected and the effects on the animal's behavior. Note that the factor of time or rate of ingestion is not observed, because the administration of alcohol takes place instantaneously. The factor of food in the stomach, however, is demonstrated and may be discussed. It is interesting to note that food in the stomach and a slow rate of intake are similar in their effect, because both increase the time required for alcohol to get into the bloodstream.

III. What Do You Do If . . . ?

Whether we like it or not, teen-agers get into situations involving alcohol both within the home and outside in activities with their peer group. Either as participant or bystander they may find themselves called upon to make decisions based upon their knowledge of beverage alcohol and the circumstances surrounding its use. Very often their knowledge is small and the issue important, and occasionally crucial to their safety or welfare. Although teachers can do little to keep teenagers out of these situations, they can do much to remedy the young person's lack of knowledge. In the following example socio-drama is used as a means of adding interest and a degree of realism to what would otherwise be a purely abstract discussion.

Concept: The problems related to the abuse of beverage alcohol require both individual and community efforts for their prevention, control, and amelioration.

Students: This example was designed for tenth-graders of average socioeconomic and academic status; with only slight modification it would be appropriate for all grades 10 through 12.

Technique: Sociodrama.

Because general suggestions concerning the actual mechanics of the sociodrama have been presented on pp. 131-133, only the specific roles and situations will be described here.⁹

SITUATION ONE: I'd Rather Not, I Think

A sixteen-year-old girl is on her first date with an eighteen-year-old whom she very much admires. They go to a party where everyone seems to be drinking, including her date. Several persons urge her to try a highball. The cast includes

Jill: The girl, who has never drank and who is somewhat fearful of what the effects might be; she has never discussed this matter with her parents.

Chuck: Her date, who has had a drink or two on several occasions in the past; he would like to see Jill drink with him; but it is not vitally important to him.

First Bystander: He is nineteen, enjoys getting a little "high" at parties, and likes to see his companions in a similar condition.

Second Bystander: She is also sixteen, this is her second occasion of drinking. She feels somewhat guilty about it and finds the presence of a nondrinker disturbing.

SITUATION TWO: Let's Have a Real Blast!

A seventeen-year-old boy's parents allow him to have a can of beer with them now and then. He is planning a party for several of his friends and he is discussing the arrangements with his parents. The cast includes

Jake: The boy who thinks that beer should be made available to the older kids he is inviting.

Jake's Mother: She actually finds the idea somewhat appealing but generally relies on her husband's judgment in such matters.

Jake's Father: He is not very enthusiastic about the idea and raises several practical questions concerning legal restrictions and the rights and attitudes of the guests' parents.

⁹Adapted from situations originally described in *Thinking About Drinking*, op. cit., pp. 17-20

SITUATION THREE Who Wants to Drive?

A seventeen-year-old and his date have attended his brother's party given primarily for his college buddies. After several trips to the alcoholic punch bowl, he finds himself somewhat woozy when the time comes to drive his date home. The cast includes

Steve: The boy who does not feel he should drive but wonders what the effect will be on his date's opinion of him if he confesses his lack of confidence.

Vickie: She has stayed with nonalcoholic punch all evening and has not noticed Steve's gradually declining capabilities. She has not had her driver's license long and has some doubts about her own ability to drive at night on busy streets.

SITUATION FOUR The Trouble with Father

A mother and her teenage boy and girl are just finishing breakfast on Monday morning during the early portion of summer vacation. Father has just left for work without any breakfast as he was quite severely "hung over" from his Sunday night drinking bout. This has been happening frequently enough to make Father miserable company on the weekends, a poor performer at work, and a threat to the stability of the family budget. Although the other members of the family have noticed the problem, they have not yet discussed it as a group, each one has been waiting for someone else to bring up the subject. The cast includes

Mother: She has had some bitter discussions with Father over the problem but is hesitant to involve the children in the matter. She does not drink and knows little about drinking problems. She believes that her husband will stop drinking once he realizes how much trouble he is causing.

Margie: She has recently graduated from high school and plans to enter college in the fall. She too does not drink but she knows enough about alcoholism and problem drinking to realize that the problem is not going to be solved easily.

Brian: He is seventeen and has just finished studying about alcohol in his health class this year. He knows some textbook solutions but has trouble focusing on the practical aspects of the problem.

In these, as with most other sociodramas, the direction they take will often be unpredictable. The teacher should attempt to anticipate the possible alternatives and be prepared to guide the class toward a reasonable consensus on each situation. However, the teacher should remember that value judgments are involved in all these situations; few courses of action are the best or the worst. The teacher's most valuable device during the follow-

up discussions will be that of returning the question to the group. Although the conclusions that may result are significant, the examining process that takes place should be even more valuable as a learning device.

As a final note of caution, the teacher should remember that many humorous situations will arise during these activities, and although most will contribute to a good learning environment, the teacher should be alert to situations where humor is inappropriate. This is particularly true of discussions dealing with drinking problems among parents. Such a situation is not humorous to the occasional student who may be living with such a problem.

IV. The Clerics State Their Case

Alcohol abuse has traditionally been viewed as a moral question by a significant portion of the public. Regardless of the validity of this viewpoint, its wide acceptance has served to involve religious leaders in the search for solutions to alcohol-related problems. In the name of prevention, religious leaders have also taken an interest in the broader aspects of alcohol use. Although the modern trend is to attribute most of the blame to social and cultural factors outside the individual's control, the church in all its forms is broadening its role and retaining an interest in many human problems that we now consider secular. The net result of all this is that religious leaders are generally conversant with most issues concerned with alcohol and often have occasion to deal with them in a practical way in programs of religious education or in counseling families with alcohol problems. Health educators are often surprised to discover that these qualities enable them to communicate with teenagers in a truly educational way. In this example four of these gentlemen deal with modern issues through use of the traditional format of the panel discussion:

- Concept:* Individual and group attitudes pertaining to beverage alcohol have important personal, social, and community consequences.
- Students:* This example was specifically designed for use with twelfth-grade students with socioeconomic and academic statuses somewhat above average; however, it is generally recommended for grades 9 through 12.
- Technique:* Panel discussion.

The specific procedures involved in the organization and presentation of a panel discussion are more dependent on local conditions than are most other teaching techniques. The availability of good resource persons varies greatly from community to community. The most desirable combination of panelists is affected in this example by the religious pattern of the populace. Perhaps most important,

administrative considerations differ in terms of possibilities for the flexible scheduling of large group meetings by pooling sections and other such devices. These basic factors will be discussed as they apply to various combinations of circumstances.

1. The attempt should be made to secure a broad and diverse representation of religious leaders as panelists. An ideal arrangement for an urban, and somewhat cosmopolitan, community might consist of a Catholic priest, a Protestant minister with a somewhat "permissive" stance on alcohol, a Protestant minister with an "abstinent" orientation, and a rabbi. In communities with a more homogeneous make-up, only two or three of these groups might need to be represented. If a large Jewish population were present, then perhaps representation from more than one Jewish subgroup might be appropriate. A good topic for such a panel would be "Acceptable and Unacceptable Drinking Practices." The basic task of the panel would be to react to questions dealing with specific examples of alcohol use.

2. The preparation of students for this activity is particularly important. Therefore a panel of this type is best scheduled for a day toward the end of study on alcohol. The basic effects of alcohol on the nervous system should be reviewed beforehand; basic misconceptions should be corrected; and some general views on acceptable versus unacceptable drinking behavior should be discussed.

3. One of the key factors in securing good panelists and making good use of them lies in arranging for their broad and effective exposure. It is often difficult for any professional person to forsake his more pressing responsibilities to appear before a small number of students; this often necessitates some special arrangements on the part of the teacher. There are several possible arrangements, each with advantages and disadvantages.

- a. *Presenting the panel to a single classroom group.* If the panelists accept this arrangement, it makes for ideal student impact and involvement. However, other sections meeting simultaneously are not served and spontaneity will suffer if the panel is repeated a number of times throughout the school day.
- b. *Pooling of sections into large group meetings.* If facilities are available this serves all the students. However, the problem of securing an all-day commitment and preserving spontaneity still remains.
- c. *Video-taping a classroom or large group presentation for closed-circuit replay.* This is a good arrangement for those few schools possessing the necessary equipment.
- d. *Arranging a modified assembly-hour program limited to the grade level involved in the study of alcohol.* This enables the panel dis-

up discussions will be that of returning the question to the group. Although the conclusions that may result are significant, the examining process that takes place should be even more valuable as a learning device.

As a final note of caution, the teacher should remember that many humorous situations will arise during these activities, and although most will contribute to a good learning environment, the teacher should be alert to situations where humor is inappropriate. This is particularly true of discussions dealing with drinking problems among parents. Such a situation is not humorous to the occasional student who may be living with such a problem.

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14

*Drug Abuse: Elementary Level**

The increasing use of psychoactive substances among virtually all segments of American society represents a legitimate area of concern for parents, teachers, medical personnel, and others with responsibility for guiding and helping young people. The educational needs in this area are great and the teacher's instructional task is made exceedingly difficult by the inherent complexity of the drug-abuse problem itself. A seemingly endless variety of substances can be used to produce a change in emotional tone or behavior. Drug abusers use everything from heroin and barbiturates to model airplane glue and morning glory seeds to produce states of intoxication. A great deal of variety also exists among the immediate and chronic effects of these various substances, the type of persons involved in abuse, the pattern of motivation, the efforts directed at control, and the medical approaches to rehabilitation.

One of the simplest ways to bring some order to this rather chaotic topic is to draw a distinction between the traditional narcotic problem of the inner city, which centers on heroin abuse, and the so-called soft-drug problems, which take their most prominent form in the use of marijuana and LSD on

*This chapter and Chapter 15 were written by Randolph E. Edwards of Southern Connecticut State College

cussion to be presented at one time to all the students that will benefit most. The main disadvantage is the disruption of the school day.

- e. *Staging a full assembly program.* Unless the program is truly outstanding, this procedure is probably not worth the trouble. Any impact on the students will be temporary unless there are adequate preparatory and follow-up activities; these are not often possible to arrange on a school-wide basis.

4. Regardless of the scheduling pattern used, it is well to ask the students to submit written questions prior to the actual panel presentation. These should be reviewed so that a group of the most representative and the most constructively provocative ones can be worked into the discussion. A certain amount of time should also be allowed for additional student questions following the formal portion of the program.

5. One-shot presentations by outside experts generally raise more questions than they answer, particularly those dealing with opinions and value judgments. Therefore, small group follow-up discussions with effective leadership are a necessary part of any such program. If possible, these should take place immediately; however, it is usually more practical to meet this need in the next regular class session. A buzz group format (pp. 128-129) works well in this situation.

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hibited, illicit trade began to develop; as this problem became more acute, the Federal Bureau of Narcotics was established in 1930 as a means of providing effective law enforcement. By this time the focus of the addiction problem had shifted to the urban and slum areas. According to the Federal Bureau of Narcotics, the urban states of New York, Illinois, California, and Michigan now contain 80 per cent or more of the addict population.² One half of the known addicts are believed to reside in New York City. Estimates of the number of narcotic addicts range from the very conservative figure of 60,000, based on those having contact with the law, to more than 200,000. The actual figure probably falls somewhere between these two. Even when the larger estimates are accepted, it seems apparent that progress has been made in controlling the number of persons involved with this particular form of drug abuse.

Although the scope of the hard-core narcotics problem is being contained, the same cannot be said for its depth or intensity. The confirmed addict exists in a world of his own, where the main objective is the acquisition of funds for the purchase of his next fix. For most addicts crime is a way of life; they are forced into burglary, shoplifting, and prostitution in order to finance their expensive habit. The typical male addict may steal \$30,000 to \$90,000 in money or merchandise in a year. In New York City alone it has been estimated that addicts must raise between \$500,000 and \$700,000 daily to pay for their habit; most of this money, of course, is obtained illegally.³ The ultimate benefactors in this situation are criminal organizations that comprise a multimillion industry extending beyond national boundaries. Raw opium flows steadily from major production areas located in the Middle East and Far East to intermediate processors in Mediterranean areas, where it is transformed into heroin for shipment to the United States.

The vicious quality of the narcotics racket has precipitated vigorous law enforcement efforts which have taken their most effective form at the federal level. During 1968 the Federal Bureau of Narcotics, whose responsibility centers on heroin, and the Bureau of Drug Abuse Control, which previously sought to control abuse of prescription drugs, were combined to form the Bureau of Narcotics and Dangerous Drugs. This newly formed BNADD presently operates under the wing of the Justice Department and brings a much needed measure of coordination to the government's law enforcement efforts. However, the majority of the violators within the United States are still prosecuted under state laws which vary widely in both their provisions and the manner in which they are interpreted and enforced.

Treatment and Rehabilitation. Governmental efforts to treat and re-

²A Hidden Health Problem—*Dangerous Drugs and Narcotics* (Harrisburg, Pa. Pennsylvania Department of Public Health, n.d. 1)

³Facts About Narcotic Drug Addiction (Washington, D.C. U.S. Department of Health, Education, and Welfare, Public Health Service, 1965)

the campus and in the suburbs. Like most other gross categorizations, this one is open to criticism. Occasionally we find acid (LSD) users in the ghettos, and heroin addicts are being found in middle-class neighborhoods with increasing frequency. Marijuana, of course, is popular in both settings, even though it may serve a different purpose for each group of users. Despite these exceptions, the general pattern prevails. The inner-city abuser turns to heroin, which uniformly produces a disabling form of addiction. The campus user's drug might consist of a mild form of marijuana, the more potent LSD, or a severely addicting barbiturate. But in the mind of the average citizen "dope" is "dope," and he makes little distinction between the various types of abuse. A review of the historical development of the drug-abuse problem can help clarify this and other related issues.

Narcotics

The abuse of true narcotics, such as opium and later heroin, has been a major health problem in the United States since the Civil War, when the hypodermic needle was first widely used. Very often injured soldiers were encouraged to use it for the self-administration of morphine, which was used extensively during this conflict. Consequently many of these men returned to civilian life addicted to this potent narcotic. The ready availability of various patent medicines containing opium derivatives constituted another factor which contributed to the growing problem of narcotic abuse during the post-war period. By the early 1900's the problem involved over 200,000 people, or one out of every 400 in the nation.¹ Most persons became involved in a rather innocent fashion, largely as a result of flamboyant advertising and enthusiastic medical reports. Addicts were found among all social classes, with perhaps a higher proportion coming from the middle and upper echelon of society.

Although some evidence of public concern can be found as early as the 1860's, when there was state legislation, it was not until the early 1900's that the public became fully aroused. This situation led to the passage of the Harrison Narcotic Act by Congress in 1914; this act placed federal controls on the manufacture, sale, and use of narcotic drugs. In many instances this legislation placed severe hardships on heavily addicted persons who were basically law-abiding citizens, and many physicians were prosecuted for attempting to ease the plight of these relatively innocent victims of circumstances. However, addicting substances were removed from the public market place, the average citizen was effectively deterred from their use, and the number of addicts was gradually reduced. The narcotic problem persisted, but its basic characteristics began to change.

The Modern Problem. Soon after the legal sale of narcotics was pro-

¹*Prevention and Control of Narcotic Addiction* (Washington, D.C.: U.S. Treasury Department, Bureau of Narcotics, 1964).

amphetamine arrests.⁴ These hard statistics, together with the informal reports of parents and educators, all point to an expanding pattern of use.

Vague Causes. Many general theories have been advanced to explain this increase; however, there is little firm evidence that can support specific causes. Research has found many youthful abusers to be psychologically abnormal prior to their contact with drugs and thus highly prone to the escape that such substances can offer. Generally rebelliousness and dissatisfaction with society's power structure is another factor that appears to motivate drug abuse. Many young people view the use of alcohol as a sign of conformity or a desire to follow the pattern of the older generation, whereas marijuana use symbolizes a rejection of the evils of contemporary society as they see it. One of their more valid criticisms concerns the increasing degree of dehumanization and alienation of the individual that has resulted from our ever-expanding technology. Schools, business firms, and governmental agencies grow larger and more impersonal. Student numbers and computer punch cards become more important than names, faces, or personalities. Both occupational and educational specialties become so fragmented that their pursuit brings little satisfaction beyond a weekly paycheck or an entry on one's transcript. Meanwhile, television commercials suggest that any problems resulting from this condition can be handled with over-the-counter pills to stop a headache, reduce nervous tension, increase alertness, or induce sleep. Although everyone knows that these particular items are not very effective, the general idea is appealing, and stronger substances can be obtained elsewhere.

Real Consequences. The theories of causation are generally vague and ill defined; unfortunately the consequences are often extremely real. A prime example is that of the barbiturates, which can produce a vicious type of addiction; however, this problem occurs relatively infrequently. More common are the various types of drug dependencies characterized by the "pot head," the "acid head," and the "pill head." Such persons are not addicted; they can terminate their drug use without fear of severe physical symptoms, but their strong psychic dependency causes them to forsake constructive social, educational, and vocational goals as they devote an increasing proportion of their time to their particular drug. Only those young persons who are particularly susceptible follow this pattern; however, when one considers the millions of persons being exposed to drug abuse, it seems clear that a very small proportion of those susceptible will yield a very large problem.

The behavioral problems induced by drug intoxication represent another source of serious concern. Authorities point out that the increasing non-medical use of certain drugs is contributing to the rising death toll on the highways, to suicides, and to bizarre crimes. Whereas marijuana can produce

⁴*Philadelphia Inquirer*, February 15, 1966.

habilitate narcotics addicts have not been pursued with the same zeal as has been the case with law enforcement. The conventional medical approach to this problem consists of withdrawal treatments followed by psychiatric counseling, with both procedures conducted in a hospital setting. Two large federal hospitals—located in Lexington, Kentucky, and Fort Worth, Texas—as well as several other state and local facilities follow this general treatment plan. Although these programs have provided a temporary respite for the addict and much useful clinical knowledge concerning his plight, they have produced relatively few permanent cures. More promising results have been achieved by such self-help organizations as Synanon House and Day-top Village. Most addicts who successfully adjust to life in these communal organizations manage to avoid further use of drugs. Methadone maintenance programs represent another approach which appears to have improved the lives of many hard-core addicts unable to lead drug-free lives. However, this approach has encountered considerable opposition because it involves the permanent administration of a drug that is itself a synthetic narcotic.

All of these programs have suffered from public attitudes which for the most part range from indifference to hostility. The addict is often jailed, when hospital care is indicated instead. Even when treatment is given, the ex-addict faces an almost hopeless task of readjustment to normal life. The restriction of his employment potential and the lack of follow-up care are examples of factors responsible for his high rate of relapse. Much of the public behavior toward the addict is based on misinformation and hearsay. This points up the urgent need for extensive research related to the basic problem and for greatly improved educational efforts both within the school and in the mass media.

Nonnarcotic Abuse

A new and steadily growing trend is found in the use of such nonnarcotic drugs as marijuana, LSD, methadrine, and various forms of barbiturates and amphetamines. Most of these substances are controlled by laws covering "dangerous drugs," a category which includes most prescription drugs which lend themselves to abuse. A notable exception to this generalization is marijuana, which is treated legally as a narcotic even though it is chemically an hallucinogenic substance somewhat akin to LSD. It is this general group, rather than heroin, whose use is presently spreading most rapidly among young people of high school and college age. Over 10 billion amphetamine and barbiturate tablets and capsules are manufactured annually in the United States, and about half of them are sold illegally. California reported a 75 per cent increase in drug-abuse arrests from the early to the middle 1960's. The Illinois Division of Narcotic Control reported a 100 per cent increase in dangerous drug cases during the same period. In 1964, New York City police records revealed a 131 per cent increase over 1963 in

dividual. A cursory review of youthful behavior or of the content of school programs provides strong evidence of the inadequacy of present efforts.

Inhibiting Factors

There are a number of apparent reasons for the lack of drug-abuse instruction; for example, some authorities have argued that young people would be more prone to experimentation and involvement following brief exposure to information on drugs. It has also been argued that knowledge itself is no guarantee of good behavior, and many doubt that education would eliminate or reduce youthful involvement. Law enforcement authorities are particularly prone to adopt this pessimistic attitude toward the educational approach. They often point to the continual increase in addiction and drug abuse in New York City, which has occurred despite the presence of drug-abuse education in the school program since 1951. A more direct barrier to the development of effective school programs on this topic is provided by the teachers themselves. The complexities, the special jargon, and the controversies inherent to the related subject matter often make teachers reluctant to involve themselves. In many cases they feel inadequately prepared both in terms of subject-matter background and training in appropriate teaching techniques; unfortunately, their assessment is often painfully accurate.

Urgent Needs

If drug-abuse education is to become truly effective, it must flow from elementary school, through high school and college, to professional graduate study and community education. As children mature, they must learn to deal with the physical, mental, and social ramifications of drug use and abuse with increasing degrees of sophistication. This requires a systematic presentation of carefully articulated content extending throughout the various school levels. Such a program would not in itself solve the drug-abuse problem. The home, the church, law-enforcement agencies, and the mass media must also contribute to the ultimate solution; however, the educational burden is a heavy one and it falls directly on the health educator.

OVERVIEW FOR THE ELEMENTARY LEVEL

In most school districts the exposure of elementary children to the hazards of drug abuse is minimal. This very fact, together with the near certainty of exposure during high school or young-adult years, makes drug-abuse education highly important during the primary and intermediate grades. Children at these levels need to acquire certain general concepts and to establish constructive attitudes which can serve to fortify them against the misuse of drugs in later years.

Drug-abuse education in the primary grades should be taught in conjunction with other closely related topics such as the proper use of medicine

a dreamy state in the basically introspective person, it can also reduce the inhibitions or increase the activities of those persons with criminal tendencies. Law enforcement officials in many cities feel that many crimes can be traced to the use of this substance.

The threat of direct physiological damage also exists in certain instances of drug abuse. An overdose of barbiturates can be lethal, and excessive use of methadrine can produce permanent brain damage. The implications of the research which links LSD to chromosome damage are still unknown, but birth defects and increased incidences of leukemia seem to be realistic possibilities. The drug abuser's nightmare of "blowing his brain" has come true in a few cases where permanent psychotic conditions resulted from a particularly "bad trip." The glue sniffing of the younger set poses the threat of asphyxiation and damage to the liver or kidneys.

Fortunately only a minority of the hundreds of thousands of youthful users experiences these dire consequences. Many of those with inherently stable personalities experiment briefly to satisfy their youthful curiosity and then avoid further contact with drugs of abuse. Others use drugs moderately enough to avoid disruption of their normal activities and drop their habit when they are more mature. But regardless of whether one chooses to adopt a conservative or inflated view concerning the magnitude of the problem, the need for well-planned programs of drug-abuse education is readily apparent. If the over-all problem is to be reduced and controlled, young people must be equipped to manage their personal behavior with respect to drug use and to help form intelligent public opinion that will support the many community measures that are needed.

THE ROLE OF THE SCHOOL

The development of drug-abuse instruction in our nation's schools has proceeded at a slow and painful pace which falls far short of the real need. This inadequacy clearly reached serious proportions by 1962, when the White House Conference on Narcotic and Drug Abuse issued the following significant statement:

The general public has not been informed of most of the important facts related to drug abuse and, therefore, has many misconceptions which are frightening and destructive. This situation is due to many causes, among which is the failure of our schools to recognize the problem and provide instruction of equal quantity and quality with that provided for other health hazards.¹

This situation still prevails despite the fact that most states have statutes requiring instruction on narcotics and drugs and their effects upon the in-

¹*Proceeding—White House Conference on Narcotic and Drug Abuse* (Washington, D. C.: U. S. Government Printing Office, 1962), p. 308

1. *Nonfoodstuffs taken into the body may be detrimental to normal body functioning.* Substances other than food can be taken into the body by eating, drinking, smoking, and sniffing. Food is essential to good health but many nonfood substances are potentially dangerous. Common household chemicals have proper uses but can be harmful if improperly used.
2. *The development of a positive awareness and appreciation of good health serves to minimize the individual's chances of involvement in detrimental activities of all kinds.* Persons who realize the many benefits of good health tend to investigate questionable substances and practices before committing themselves to their use; this attitude functions as a general protective device against many unforeseen dangers.
3. *Peer influence appears to be a significant factor in the encouragement of drug abuse.* The development of wholesome critical thought is essential to selection of sound group association, susceptibility to unfavorable influence can be harmful and may be prevented. "Taking a dare," particularly when it involves an unknown substance, and accepting "favors" from unfamiliar persons are typical of situations that lead to drug abuse.
4. *The physiological and psychological effects of drugs vary greatly, depending on a wide variety of factors.* A medicine can be beneficial to one person and harmful to another. The specific effect of a drug, particularly one taken for the first time, is an unknown quantity. Experimentation with harmful substances calls for knowledge of the special hazards.
5. *"Medicines are designed for specific purposes and can be dangerous when improperly used"*⁶ Judgment, maturity, and in some cases professional training are required for the proper administration of medicines and drugs. Physicians prescribe medicines only after consideration of many specific factors; nurses and parents commonly follow directions carefully before dispensing medicines. Illnesses or accidents often result when these substances are taken under other conditions.
6. *The inhalation of volatile substances can produce intoxication and physiological damage.* Sniffing the vapors of glue, gasoline, bleach, and so on, may result in asphyxiation and other mishaps during intoxication. In some cases prolonged use of such items has resulted in damage to the internal organs of the body.

Instructional Considerations

At the primary level the natural characteristics and needs of the young child are the key factors which determine the proper selection of instructional techniques. Curiosity, imagination, and individualism are several of

⁶*Conceptual Guidelines for School Health Programs in Pennsylvania* (Harrisburg, Pa.; Pennsylvania Department of Education, 1970), p. 75

and the prevention of poisoning. The basic task is to help the child understand the danger involved in the introduction of foreign substances into the body. The teacher should strive to develop an awareness that household chemicals and drugs have proper uses, but that they must be treated with respect. Children must understand that medicines are not to be taken except when administered by a responsible adult. They must learn to avoid sniffing fumes from gasoline, glue, cleaning fluid, and other volatile substances in the home. The development of proper attitudes and modes of behavior toward the more common household items will provide a logical basis for later educational experience directed toward psychoactive substances.

In the upper elementary grades the topic of drug abuse should be presented in a more clearly defined form. The child needs to distinguish between stimulant, depressant, and hallucinogenic drugs in at least a general way. The development of some concept of dependency or addiction, of the general types of laws designed to prevent abuse, and of some of the useful medical uses of narcotic or other psychoactive drugs is also beneficial to the upper elementary child. Some knowledge of the social and emotional factors which encourage drug abuse is of particular importance. The child that leaves the sixth grade with some general idea of the pressures and temptations he may encounter will be better able to cope with any contact he may have with drugs during his secondary school years.

Both the primary and the upper elementary years provide an ideal time for the development of sound personal values related to health in general. Children are capable of learning at an early age that their health is a precious resource that requires judgment and care for its preservation. If the study of the normal structure and function of the human body is handled properly, children will develop an appreciation of its complexity and capabilities that will tend to deter many types of abuse. An appreciation of the importance of a healthy personality and a rudimentary understanding of the factors that determine its development may also affect health behavior in many beneficial ways. Although instruction in these areas does not constitute drug-abuse education per se, it is important to the development of sensible behavior toward drugs.

Suggested Concepts

The concepts suggested in this chapter are vital to drug-abuse instruction at the elementary level. They are not intended to be all-inclusive; omissions will be apparent, particularly in terms of local needs and situations. However, the author feels that the concepts included represent a fairly comprehensive sampling of the drug-abuse concepts that should be included in school health education curricula. They are expressed in somewhat technical language, which must be translated into terminology and situations appropriate to the grade level involved.

medicines can be dangerous when used improperly is more difficult to develop because most children have been fortunate enough to avoid direct experience with this problem.

- Concept:* Medicines are designed for medical purposes and can be dangerous when improperly used.
Pupils: Suggested for first and second grades.
Techniques: Story telling, role playing, and creative reporting.

This lesson begins with the teacher reading a story to the class. Narrative which illustrates health content may be obtained from a variety of sources (as discussed on pp. 129-131). This particular one was composed by the teacher herself.

1 TIMMY AND THE PINK CANDY

One bright sunny afternoon last week six-year-old Timmy Hanson was on his way home from the Elmwood Elementary School, where he was a member of Miss Phillips' first-grade class. He was walking with his two best friends, Fred Block and Jay Arnold. They were discussing play plans for the remainder of the afternoon and decided to do some exploring in the large patch of woods behind Timmy's house.

As they approached Ferry Lane, where Timmy would leave his friends to go home, Timmy spotted a small round bottle with a bright red top. "Hey, look at this you guys," cried Timmy as he picked up his new discovery for closer examination. "It's full of candy, pink-colored candy," exclaimed Jay. Taking off the bottle top and sniffing, Timmy noticed that the candy had no special odor. "Let's try some," said Fred as he reached for the bottle. But Timmy had a better idea; he suggested they take their new-found treasure into the woods when they went exploring. The three boys agreed on this and hurried home to change into play clothes and have a quick snack.

Upon meeting at Timmy's house about thirty minutes later, they hurried excitedly into the woods and began to follow one of the several trails. After going a short way Jay suggested that they climb up on a big flat-topped rock and use it as a look-out post. As they sat on the rock, Timmy pulled the bottle of pink tablets from his pocket and popped one into his mouth. He passed the bottle to his friends, who also took tablets and chewed them cautiously. Fred and Jay made faces and agreed that the candy tablets did not taste very good. Timmy liked the taste and continued to eat many tablets before finally putting the bottle in his pocket and leading his playmates deeper into the woods.

Timmy did not eat much dinner that evening. His stomach felt odd and he had a headache. Strangely, though, he did not want to go to bed. His mom and dad noticed that he was rather restless, even nervous. Going to bed appeared to be out of the question. He complained that his mouth felt dry, and his body appeared warm and sweaty.

As the evening wore on Timmy's parents became more worried. Timmy seemed excited and full of energy. He could not sit still and could not stop

the inherent traits that may be successfully used in encouraging children to appreciate and protect their health. They provide the basis for the successful use of role playing, playlets, puppet shows, and simple experiments. The teacher should also keep in mind that young children will relate most effectively and enthusiastically to what they know and what they have experienced. This fact has particular application to a content area which includes such topics as medicine-cabinet safety, household chemicals, drugstores and druggists, and doctors and pills; most lessons can be planned within the context of direct home and community experiences.

Children at the upper-elementary level have broadened their range of activities and interests. They are more adventuresome, more concerned with peer approval, and thus more susceptible to unfavorable influences. They are becoming increasingly critical of the information presented to them by parents, teachers, and other adults. They want to be shown why a particular fact is true or why a particular action is wise or unwise. They are ready for knowledge in the form of solid facts. Accurate presentations and candor are becoming more important to the teacher's retention of their trust and confidence. It is particularly important that preaching and scare tactics be avoided at this level. Objective presentations of the real dangers involved in drug abuse are impressive enough in themselves and far more effective in the long run than any distortion or exaggeration of the situation.

The upper elementary child should begin to learn how to make reasoned judgments and independent decisions. He needs the opportunity to question and test his views in open discussion. This requires the development of classroom environment wherein the child feels secure from ridicule, free to express his real beliefs, and free to make decisions that are truly his own. It is far better that this process take place in the classroom, where accurate facts and mature guidance are available, than in random peer group discussions, where conditions are less favorable for well-reasoned decisions.

PRACTICAL APPLICATIONS: PRIMARY LEVEL

In this section examples of instructional techniques will be presented, each related to a concept and relevant content material. The concepts described in the following teaching situations may be effectively used at most elementary grade levels. Variable factors, such as type of community and experience and maturity of pupils, must be considered by the teacher in selecting appropriate concepts for this particular subject.

1. Bottled Trouble

Respect for medicine does not come naturally to most children. They accept with trust whatever their mother, school nurse, or family physician administers; this is the way it should be. An understanding of what a medicine looks like and what it does can be easily learned if the effort is made at home and in school. However, the concept that

- C. Dr. Bradford's reaction to the description of the bottle's contents.
- D. Discussion and thoughts of the reactions of Timmy's parents as expressed in the hospital waiting room.
- E. Dr. Bradford's explanation of Timmy's treatment and need to stay in the hospital.

Pupil questions, commentary on personal experiences, and discussion, will naturally follow and should be encouraged and utilized.

2. *Problem-situation approach.* This storytelling technique calls upon the teacher to stop and emphasize pertinent points, ask significant questions, and pose meaningful problems.

We have previously listed a number of potential pertinent points, A through E. Teacher questions and/or problems might include the following:

- A. What should Timmy have done with the bottle (A natural and logical solution is desired, not an arbitrary decision to show it to his parents immediately. Childish curiosity should be accounted for and understood by the class. The teacher may note with interest the varied answers.)
- B. Was eating the pink candies an intelligent thing to do? Why? Was it a natural thing for curious boys to do?
- C. Why did Timmy not tell his parents at dinner what he had done? Did he forget? Did he think it unimportant? Was he afraid of being punished? (This is a logical time to stress the importance of children reporting to their parents or teachers any strange feelings of dizziness or sickness following the ingestion of any substance; this is particularly vital if a strange substance has been swallowed.)
- D. Why was Dr. Bradford so alarmed? (This is an opportune time to explain the doctor's role in prescribing medicine.)
- E. How had Timmy been treated at the hospital. Why did they pump out his stomach? Has anyone in class ever been to the hospital for this purpose?
- F. Why was Timmy a lucky boy? What do you think Timmy will learn from this experience? What will you do if you find a bottle of strange-looking candy?

Regardless of the storytelling technique used, the teacher should strive for pupil comprehension of the story's "message." In Timmy's story there are several points that refer significantly to the original concept. These should be clearly illustrated along with other related factors that are important to pupil health and safety awareness. Simplicity and clarity are essential storytelling attributes.

talking. They had never seen their son act this way before. Upon questioning, Timmy told of finding the bottle of pink candy and how he ate many of them while playing with Fred and Jay. His father asked if he still had the bottle and Timmy said, "Yes! It's in my pants pocket." One look at the label on the bottle that Timmy showed them and his parents knew that they must call their doctor immediately.

When Timmy's dad read the label to Dr. Bradford—"One tablet one-half hour before each meal"—the doctor almost shouted into the telephone, "Get that boy to the hospital immediately." (The doctor suspected the pills were an amphetamine, prescribed in this case for diet control.) Timmy's mother wrapped him in his bathrobe and slippers and his dad sped them all to the hospital in the family car. Dr. Bradford met them at the emergency entrance and quickly took Timmy into a special room. His parents went into the waiting room, where they stayed until hearing from the doctor. Timmy's mother immediately telephoned the parents of Fred Block and Jay Arnold to tell them what had happened. Their parents were quite surprised to hear about Timmy being sick and in the hospital. They reported that Fred and Jay were well and sound asleep. They were relieved to learn that their sons had swallowed only one pink pill.

Timmy's mom and dad were very worried. They could not understand why their son had eaten strange pills without first asking them. The more they thought about it, the more they realized that perhaps it had not been strongly impressed upon Timmy that children should not eat strange foods and candies, whether they are found or offered by someone. They also wondered if this subject had ever been discussed in his first-grade class at school. (When this unhappy situation was over, they were sure to sit down with Timmy and talk about eating strange foods, particularly away from home.)

After what seemed to be a very long wait, Dr. Bradford came out to report that Timmy was out of danger and was going to be all right. His stomach had been pumped out thoroughly and he had taken some special medicine. Timmy had eaten amphetamines that were meant for grown-ups, and then only *as directed by a doctor. Such pills can make anyone very sick*, children in particular, when too many are eaten or swallowed at any one time. Timmy stayed in the hospital overnight so that the doctors and nurses could maintain a constant check on him. He was a sick little boy, and very lucky that his mother, father, and Dr. Bradford had been there to help.

STORY LESSON POSSIBILITIES

Story telling can be effective as a teaching technique with young children in several different ways.

1. *Complete story flow.* Timmy's story is first told in its entirety. Following this the teacher may *emphasize* or *dramatize* particular situations or pertinent points. In this story several examples might be

- A. Timmy's decision to eat some of the pink candies.
- B. Timmy's failure to tell his parents about eating the strange candies.

Following this culminating class project the teacher may choose to sum up the important points. He will want to be certain that the fundamental precepts contained within the original concepts are clearly understood. Often a short discussion and question-answer session can assure the retention of these essential points.

II. Take a Deep Breath

The deliberate inhalation of vapor from volatile chemicals is a dangerous practice and one that is engaged in by many children of elementary school age. There is also the danger that the child of primary-grade age may drink strange fluids found within the home. In this lesson the dangers of experimentation through inhalation of volatile substances are presented effectively and realistically.

Concept: The inhalation of volatile substances can produce intoxication and physiological damage.

Pupils: Suggested for the third through sixth grades.

Techniques: Experimentation, exploration, art, and composition.

The teacher may introduce this lesson by bringing into class a can of gasoline, paint thinner, paint remover, kerosene, or lighter fluid. Any of these volatile chemicals may be found in the home. Have the pupils smell the contents while covering the label and ask for their reactions. Ask if anyone can identify what is in the can. When identified, ask what its use is. Where might it be found at home? (Permission for this activity should be obtained from the proper school authority.)

During this experiment pupils will undoubtedly note two definite characteristics: a pungent odor and an irritation of the eyes and nose or both. The label should be examined and its printed warning explained. Before a concentrated effort is made to teach the dangers of vapor inhalation and drinking of volatile chemicals, it would be advisable to have the class become familiar with many of these common articles found within the home. Other than those already mentioned, additional chemicals might include cleaning fluid, laundry bleach, and lacquer.

Youngsters have also sniffed other household substances, such as nutmeg powder, hair spray, moth balls, and pepper. It has been suggested by numerous law-enforcement groups and others that acquainting youngsters with these and other potentially harmful substances can lead to curiosity that results in experimentation. Most educators agree, however, that experimentation can probably be discouraged by pointing out the harmful effects to young children in a clear and meaningful manner. Minor experiments with large insects and small mammals can result in an effective learning experience. The classroom teacher may familiarize himself with the simple procedures

STORY FOLLOW-UP

The story has been presented and discussed and the pupils are interested and eager to learn more. To maintain this favorable teaching-learning atmosphere the teacher will want to follow up with an interesting and effective activity, one that is practical and preferably related to the home and familiar surroundings. Two suggested activities follow:

1. *Discovering potential trouble areas in the home.* With the assistance of their parents a selected group is instructed to examine the home medicine chest. Pupils may discuss the use or uses that are made of the various medicines, drugs, pills, and so on, with their parents and bring a general list to school. Children should be made aware of the type of container, dispensing top, and any obvious markings and warnings. Medicines that require a doctor's prescription should show the pharmacist's label with specific directions.

2. *Discovering potential trouble areas in the school.* It may be advisable to have several pupils visit the school nurse in her quarters and follow the same procedure as that described in the home. Home and school are the two familiar areas where young children feel secure, and these learning experiences will have practical implications for them.

A combination of role playing and creative reporting could be used as a means of sharing the information gleaned from the home or the visit with the nurse. One possibility would be to have pupils represent themselves as various forms of medicine found in the home medicine chest. This calls for forming working groups to participate in the varied phases of this class project. One group of pupils reports on its experience of checking the home medicine chest. This group should develop a short story or narrative report that emphasizes personal thoughts, observations, and ideas related to the subject. Another group does the art and construction work. This involves the construction of paper and cardboard medicine bottles and pill boxes. (Light corrugated cardboard is excellent for shaping bottles and small boxes.) These will be covered with paper, colored, and labeled in large letters. This type of activity is enthusiastically endorsed by most youngsters of this age. The teacher may assist a third group in creating a dramatic presentation procedure. A large paper or cardboard medicine chest or bottle is constructed with a separation in the middle. This should stand or be held erect in front of the class. Each reporting pupil steps through the middle slit with his labeled bottle or pill box in hand to make his verbal presentation and then moves over to one side. Each pupil may role-play a particular medicine or drug and verbally dramatize his little story. Some pupils, however, may prefer to report in a factual manner.

further awareness of the dangers and uncomfortable reactions to sniffing volatile chemicals and other harmful substances. Practical experience is thereby enhanced by specific understanding through physical contact. *Immediately following this contest a discussion of the realistic discomforts and nasal irritation can have sharp and significant effect.*

Experience has proved the preceding technique to be a most effective teaching procedure. However, a word of caution is appropriate. The school medical and administrative authorities should be informed and their sanction obtained. The school nurse or physician might also be invited to observe. The children should be told how to sniff very lightly. (A deep inhalation is not recommended or necessary.) If the light effects of sniffing one or two substances result in uncomfortable irritant reactions, stop. The point will have been made.

The following hypothetical situation will serve to illustrate how this experience can be effectively followed up with class discussion:

A TYPICAL EXAMPLE

Mrs. Benjamin is quite pleased at the way her third-grade class responded to the Blindfold Sniff Test. She wishes to follow up the physical aspect of this realistic experience with a discussion of personal reactions and asks for comments. Sally begins with a wry face, "They made my nose sting." Barry noted a "tingling feeling" in his nose. Kathy exclaimed, "I breathed real deep from that white jar and it made me feel funny—like a little dizzy." Mrs. Benjamin explained that "this was laundry bleach that mothers put in the water to make the clothes whiter. It should always be kept high on a shelf or locked in a closet, away from your younger brothers and sisters."

Tommy remarked, "Some of that stuff smelled like the things my dad uses to paint with. He keeps them with his tools in the basement." Brett was quick to point out that, "My father keeps the tops tight on all of his paint cans." Krusty identified gasoline and said that it "sure smelled strong." Donna mentioned that her father used gasoline in his lawn mower and that it was kept in a tightly closed red can, high on a garage shelf. "He never smokes a cigarette when he is filling the gas tank on the mower," she said.

Mrs. Benjamin was pleased to see that her students were quite aware of numerous other safety factors. This, along with their negative physical reactions from sniffing, would serve to strengthen their curiosity for knowledge and need for caution. Pat chimed in with a rather astute observation, "If all the things in these bottles and cans burn and sting our eyes and nose, then we should always be careful with them." And Carol, thrusting her hand upward, half shouted, "Anything that will hurt us can't be a friend."

Smiling at Carol's philosophy, Mrs. Benjamin hastened to illustrate a most important point: "Most drugs and chemicals serve a useful purpose and should always be treated with care and respect. This is why reading the label and understanding and following its directions are so very important."

or investigate the possibility of someone from the science department of a nearby college or university demonstrating before the class.

The class should have the opportunity to

1. See these substances in their common form.
2. Identify their individual odor and to some extent experience the eye and nose irritation they cause.
3. Become familiar with the type of container in which they are found.
4. Become familiar with the label and understand its importance.

CLASS ACTIVITIES

In providing his class with an opportunity to observe and learn about volatile chemicals, a teacher has several interesting possibilities available for his class:

1. An enterprising teacher would do well to approach a local hardware or general department store and persuade them to loan a demonstration display of volatile chemicals for his class. Many stores are happy to cooperate, and often a knowledgeable store manager or supervisor will lend valuable assistance.

2. A home survey checklist can be constructed in class and used in cooperation with helpful parents. Pupils may check with their father on the kinds of dangerous chemicals he keeps in the basement and garage. Mother may assist in determining potentially harmful substances that are usually found in the kitchen and laundry room. As a result the list stated previously may well be lengthened.

3. Enterprising youngsters can be encouraged to select and clip pictures of these dangerous substances from many of the current popular periodicals. Labels from bottles and cans containing volatile substances may be brought to class for study.

4. After pupils have had an opportunity to learn visual form, odor, and irritant sensation of the individual substances, an identification game or contest can prove to be a valuable and entertaining instructional technique. Selected teams or teams by class rows will add competitive spice to the learning situation. Pupils are blindfolded and allowed to sniff from the open container. The best procedure is to have each contestant sit in front of his row and move to the rear when his turn is finished. With several substances to be identified, each contesting pupil will have ample time between each sniffing performance to refresh his olfactory powers. Team scores may be kept by nonparticipating students or by the teacher. Pupils and teacher alike will find this a unique and rewarding experience, providing sufficient background has been established.

This activity should serve as a fine opportunity to reinforce

2. Encourage pupils to *speak their thoughts*.
3. Choose leading words or phrases that stimulate thought and motivate.

Mrs. Baird begins by reminding the class to "be alert and concentrate." She asks that they raise their hands when they want to answer. Her first word is *health*. Responses from pupils may be the words *active, not sick, and lots of energy*. Her next term might be *health protection*; the responses: *drink milk, exercise, fresh air, plenty of sleep and eat your vegetables*. Mrs. Baird then tried a negative term—*sickness*—to which the pupils responded with *doctor, stay in bed, medicine, no fun, and no school*.

This format should be developed with a blacklog of provocative terms for pupil response. However, pupil enthusiasm and motivation should be watched closely, because spontaneity can be harmed by prolonged exposure. The teacher should be alert for those pupils who may tend to dominate the discussion. This may be an opportunity for the teacher to involve some of the more reticent class members.

Mrs. Baird now approaches the subject of drug abuse. She uses the word *drugs*. In a nondrug-oriented community probable responses may well be *pills, LSD, doctor, marijuana, medicine, sick, drugstore*. Pupil response in a community where drug abuse is a problem will undoubtedly consist of expressions that are a part of the drug-abuse vocabulary. The vocabulary of drug abusers varies from locale to locale and changes frequently. Most youngsters in this environment may not be using drugs themselves, but they usually "know the score," and the language is a vital part of it. Examples could include such terms as *pot or grass* (marijuana), *reefer or joint* (marijuana cigarette), *junkie* (narcotics addict), *acid* (LSD), *gassing* (smelling gasoline fumes), and *gluey* (glue sniffer). These terms may be briefly identified for immediate pupil comprehension and the game may continue without a break in continuity. A pupil who writes well can put new words on the blackboard as they arise in the game.

If pupils display obvious firsthand knowledge during this activity, it is best that teachers not register obvious surprise. A matter-of-fact reaction is conducive to uninhibited pupil responses and serves as a good general policy for situations where youngsters are discussing subjects that may reveal habits and thoughts of a personal nature.

VARIATIONS

1. Depending on the type of class and subject matter, spontaneous response without raised hands can produce spirited classroom discussion. This "adult" approach should be an earned privilege and one that is encouraged by a progressive teacher. Free response also tends to

During the remaining portion of the discussion Mrs. Benjamin led the class in a consideration of the dangers involved when volatile substances are inhaled for extended periods of time. She managed to insert information concerning the general symptoms that might appear and the need to secure adult help when these situations occur. She attempted to avoid the use of fear-provoking tactics but sought to place proper importance on the possible consequences. Having experienced minor discomfort in class, her pupils would seem to be in a better position to avoid a more serious encounter with these substances elsewhere.

III. A Sound Mind in a Sound Body

What does health really mean to elementary school youngsters? Do they have an understanding of what constitutes good health? The central question is how to create an appreciation of the value of good personal health. Nowhere in the entire range of health subjects is there greater significance attached to these questions than in the drug-abuse area.

Young people in the fourth, fifth, and sixth grades should be learning how to make reasoned judgments through the acquisition of knowledge and the development of analytical ability. They should understand that every individual has a responsibility for maintaining and safeguarding his health. This has particular significance for those youngsters who come from neighborhoods where drug abuse is a problem. The elementary teacher should endeavor to assist pupils in developing an awareness of their body and an appreciation of health as a precious resource.

Concept: The development of a positive awareness and appreciation of good health serves to minimize the individual's chances of involvement in detrimental activities of all kinds.

Pupils: Fourth, fifth, or sixth grades.

Techniques: Inductive learning, word association.

The art of logical persuasion through inductive reasoning can be a motivating and productive instructional technique. Some skill is required by the teacher, which is obtained through trial and error in the classroom. It is very effective when introducing a unit of study or a single topic or theme. In the following example the teacher used it first to explore the general feelings of the class toward health and then to examine some specific content on drug abuse.

Mrs. Baird is starting a short unit of study in drug abuse and will begin by using a word-association game. She should keep these points in mind.

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It seems to follow that when the motive of imitative behavior is to attain status, various antisocial acts or acts which may involve personal harm may be expected.

Concept. Peer influence appears to be a significant factor in the encouragement of drug abuse.

Pupils: Fifth and sixth grades.

Techniques: Class discussion culminated with sociodrama.

A class discussion on glue sniffing would be best introduced with some references to specific events or cases that would convey real meaning to the pupils. Appropriate lead-ins would include newspaper clippings, magazine articles, or references to recent television shows or assembly programs covering this topic. Occasionally some dramatic occurrence within the immediate neighborhood or community provides an ideal teaching opportunity for the alert and flexible teacher. Regardless of the specific means used to generate interest and involvement, the teacher should guide the class through a systematic coverage of the essential points. The information and thought-provoking ideas found in the following paragraphs should generally be included in such a discussion.

GENERAL DISCUSSION POINTS

Young glue sniffers are usually introduced to the habit by one of their own crowd. Is this because they have the wrong friends? Glue sniffing parties are popular, because there is a strong desire to be accepted by glue-sniffing companions. Is this kind of popularity desirable? Is this situation potentially dangerous?

There is always the chance that the youngster who continues to use glue and other volatile chemicals may extend his practice to other forms of drug abuse. In New York City there are data that suggest that glue sniffing may currently be the most likely prelude to later heroin use among young people.¹

As with any beginning drug experimenter, the extent and length of involvement is always unpredictable. Youngsters should be aware of the many potentialities. Sniffing can lead to antisocial acts or acts that may cause personal harm. There are countless stories of youngsters going berserk—stabbing family members, driving with extreme recklessness, and so on.

A tendency toward self-destruction is often veiled by a dreamlike exaggeration of a sense of power. An example of this is one case in which a boy fell from a roof and suffered severe injuries while attempt-

¹Charles Winick and Jacob Goldstein, *The Glue Sniffing Problem* (New York: American Social Health Association, n.d.), p. 10.

encourage pupil reaction, particularly among the more reticent class members.

2. In certain situations and with certain subjects the word-association technique can be effectively used with competitive teams. This not only adds spice to the learning process, but also affords the teacher an opportunity for evaluative measurement.

Competition in this activity will produce better results if it is used as a culminating activity during the final stages of a drug-study unit. By this time all pupils will have become knowledgeable and will be prepared to participate with confidence.

3. Use of the tape recorder presents both teacher and pupil with a rather unique classroom opportunity. Upon introducing the study of drug abuse, the first activity will be to play the word-association game. The entire discussion is then recorded. Upon completion of the study unit, the original words are used in a concluding game. It is interesting to note the increased knowledge and reaction speed. An effective technique is to play back the first tape after each word and reaction so that improvement may be noted. This technique can be very beneficial if the alert teacher also effectively uses the stop-action feature of the tape to clarify uncertainties and reinforce recently gained knowledge.

SELECTION OF TERMS AND PHRASES

Keeping the concept in mind is highly significant when using this technique. Children at the fourth- through sixth-grade level will have ideas on the care and protection of their health. The child usually sees this as "taking care" of his body. This simple but significant fact should be kept in mind when selecting words or phrases for this activity. Examples for the teacher in relation to this concept include the following:

<i>health</i>	<i>protection</i>
<i>sickness</i>	<i>responsibility</i>
<i>body</i>	<i>doctor</i>
<i>medicine</i>	<i>wash</i>
<i>sleep</i>	<i>examination</i>

Words leading into the drug area should be selected according to the conditions previously listed. However, for variety and interest the teacher will need to consider use of positive and negative terms, abstract and specific terms, factual terms and new terms.

IV. Flying High

The desire to be accepted is very strong in young people. Many social aspects of drug abuse seem to exemplify the role of friends and friendship groups, particularly where glue sniffing is involved.

1. School and community libraries.
2. Doctors.
3. Federal Bureau of Narcotics and Dangerous Drugs, local division.
4. Youth agencies.
5. Public health department.
6. Police department.

Student research, whether individual or in committee, should be well planned. Specific aspects of the problem should be investigated. Teacher guidance with reference materials is essential. Articles in the current popular periodicals can be good sources of information and often include a bibliography, a potential source of further information. Teachers should also consider the possibility of hearing knowledgeable speakers from the community, or possibly from within the school system. Informal presentations are best. Provide an opportunity for class questions and discussion with the guest.

Perhaps the most effective speaker would be an ex-sniffer, who could be a student at the junior or senior high level. This approach is being used with increasing effectiveness as educators discover that our youth readily identify with the problems and experiences of one of their own kind in the use of dangerous drugs and other questionable substances. The teacher should plan the presentation with this youngster and understand his approach to the problem and what his message will be. The teacher may wish him to touch on or emphasize certain points. He could explain how he got started on glue, particularly if "friends" introduced sniffing to him. He could discuss "following the crowd" as he experienced it. This could conceivably be the most significant and successful teaching technique used during this unit of study.

SOCIODRAMAS

Now that the class has discussed the basic aspects of glue sniffing, the teacher may decide that a creative dramatic effort would be an interesting culminating activity. He introduces the idea to his pupils, explaining that they are going to participate in a series of sociodramas and that basically this involves the spontaneous acting out of situations by two or more persons who show the emotional reactions of the people in the situation as they perceive them. Students are to play these various roles using their imagination and newly acquired knowledge. There is no script, no formal rehearsing, and no memorizing of lines. (See pp. 131-133.)

Problem Situations. A number of varied problem situations involving glue sniffing activities must be posed. Total class involvement is called for. Typically realistic situations include the following:

ing to fly. In another case a young sniffer attempted to fight an on-rushing train and barely escaped with his life. Although these acts of violence and self-destruction are the exception rather than the rule, it must be understood that such potential is always present.

Other antisocial acts that have been attributed to sniffing include truancy, burglary, disorderly conduct, running away from home, drinking, and curfew violation.

The possibility of arrest is ever present for the youngster who commits various antisocial acts as a result of sniffing glue. Laws prohibiting glue sniffing have been passed in several states. The possibility of arrest is worthy of serious contemplation by the young person inclined to sniff glue.

The available data suggest that glue sniffing is a reflection of susceptibility to social pressure. Many sniffers have a low opinion of themselves and find it difficult to communicate with others. They tend to be passive, anxious, withdrawn, and disorganized and tend to have a weak personality which may break down under stress.²

Glue sniffing should not be considered as an isolated event. It usually involves the family and community and is symptomatic of underlying emotional disturbances. It is not the use per se which is important, but the factors which cause the youngster to engage in this practice. This fact, which may well apply to the majority of youthful drug abusers, should be pointed out to students.

SPECIFIC TEACHING HINTS

A teacher would be wise to emphasize the *dangers to health* rather than the "badness" of the glue-sniffing practice. Emotional and negative teaching may serve only to "turn youngsters off" and destroy good intentions, regardless of factual validity. Because self-destructive impulses play a major role in glue sniffing, an emotional appeal dramatizing the dangers to health may attract the attention of those few potential sniffers whose self-destructive impulses are particularly strong.³

Provide the pupils with an opportunity to analyze and discuss all types of acceptable behavior and contrast them with the antisocial varieties that are exhibited by the glue sniffers.

Depending on the time allotment for this topic the teacher will want to provide a variety of learning and fact-finding opportunities for his class. Aside from class discussion, personal guidance, and factual contribution, the teacher may wish to consider the following areas for student research:

²Ibid., p. 15.

³Ibid., p. 17

Specific Procedures. First, the specific problem situation is selected. Then the number and description of characters is determined and the student actors are selected. The characters are given a large name card or other means of identification. If the sociodrama is to take place almost immediately, allow the participants a brief preparation period. If scheduled for the following day, there is greater opportunity for study of the questions and pertinent points to be emphasized in the drama. There is merit to both the immediate portrayal and the more deliberate approach. The teacher may make assignments for those to be given tomorrow while finalizing plans for today's performance. Once the setting is described the drama can begin. The action should continue until the various characters have responded sufficiently to make their positions clear. It is desirable that the drama be terminated while interest and enthusiasm are high. Questions and discussion should follow. A character might be asked how he felt when a certain event occurred. Would any class members have responded in a different manner?

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1. Four youngsters are meeting in Billy's garage to sniff glue. Jim brings along one of his classmates to acquaint him with his pals and show him how to sniff. (Portraying negative and positive reactions would be valuable here. Pupils should see both sides of the issue and judge the available criteria for themselves.) This could be two short sociodramas showing opposite reactions, or Jim could bring two friends at the same time and they could disagree on their choice of joining the sniff club, and state their reasons.

2. An older student from junior or senior high school attempts to entice a grammar school pupil to sniff glue. If talking and coaxing prove worthless, the older youngster may threaten physical harm. (This again points up the danger of questionable companions. In this case a much older person is involved, plus the possibility of bodily harm.)

3. Brothers Tommy and Timmy are trying to sniff glue in the back yard. Mother (or Dad) happens to find them and asks for an explanation. Caught in the act, the boys describe their attempts at glue sniffing for the first time. Two possibilities are

- a. Parents are completely uninformed about glue sniffing. They find someone who is familiar with this activity (doctor, nurse, public health department, police, neighbor) to explain the dangers involved to the entire family.
- b. Parents are knowledgeable. They discuss the situation with their sons. Is punishment justified in this case? Where did Tommy and Timmy learn about sniffing, and from whom?

4. A group of youngsters are members of a glue-sniffing club. They have been using glue as well as sniffing from open gas tanks of automobiles. What are some of the significant physical reactions that can result? (Such reactions can be described and portrayed with surprising realism by pupils who understand what is involved. This is particularly true in classes where one or more youngsters have at one time sniffed glue. When possible, take advantage of willingness to share personal experiences. This type of realism can create an indelible impression.)

5. Two ex-glue sniffers are sitting and discussing their experiences. Pertinent thoughts could include

- a. How they got started.
- b. How they sniffed.
- c. When and where they sniffed.
- d. Immediate reactions, mental and physical.
- e. How they stopped (who discovered them and what, if any, punishment they received).
- f. Advice for other youngsters.

recently said that if a random check were made in the nation's high schools (particularly those in cities and heavily populated suburban areas) one would probably find at least one carrier of drugs in every school checked.⁴

Thus far the official evidence, such as the sources cited, indicates that marijuana and other nonnarcotic drugs are the commonly selected drugs of the young abuser. More recently, however, a significant heroin problem has developed in some urban high schools, particularly in New York City. Although it is difficult at this time to determine the strength of the new trend toward this more serious form of abuse, the possibilities are truly frightening. This lack of accurate data concerning the magnitude or direction of the heroin threat, coupled with its rather awesome potential, is typical of the general problems facing those who seek to combat drug abuse among teenagers.

Probable Causes

Although it is very difficult to identify the factors which underlie the increase of drug abuse with any degree of precision, there are some prime suspects. Raised with television, stereo, and transistor radios, today's teen-agers have a broad appreciation for perceptive experience, sensory awareness, and expanded or altered consciousness. Advanced technology has created new concepts in time, space, and human relationships.

They have been thrust onto the threshold of a science fiction future which, along with its promises, poses threats to the quality and even the existence of life. The continued involvement of the United States in world strife and the military draft have created further uncertainty and disillusionment among youngsters who, for the most part, have been raised in a relatively lenient and permissive atmosphere. This permissiveness, together with their increasing perceptiveness, probably has contributed to a high degree of skepticism about adult competence. Young people tend to view the dictates of parents and teachers as part of the same authoritarian and bureaucratic "establishment" that is, in their eyes, bungling the international situation, establishment of equal rights for all, abolition of poverty, and so on. This interpretation leads to a spirit of rebellion; *for many, drug abuse is a part of that rebellion.*

In addition to the general factors that appear to support the abuse of drugs, there are many more specific reasons that are either expressed by youthful abusers or inferred by behavioral scientists who study the problem. Their validity is also difficult to verify; however, they merit thoughtful consideration among those persons seeking a fuller understanding of drug abuse. Some of the reasons commonly related to youthful involvement with drugs include the following:

⁴"Straight Talk About the Drug Problem," *School Management*, February, 1968

15

*Drug Abuse: Secondary Level**

Drug abuse as a widespread problem among high school students is relatively new. Prior to the last five or six years it was almost unheard of. However, this is no longer the case. Statistics from the Los Angeles Police Department show that about 4,000 youngsters under eighteen years of age were arrested in their area in 1967 for drug violations; this compares with 2,000 such arrests in 1966.¹ Marijuana offenses accounted for two thirds of these arrests. Philadelphia Superintendent of Schools Dr. Mark R. Shedd has recently admitted that the drug problem has taken hold in nearly every high school in that city. Here again marijuana was the prime drug involved.² A Mamaroneck, New York, survey in 1967 indicated that 20 per cent of the high school students had tried drugs of various types and that 5 per cent were continuing their use on a regular basis.³ A Michigan education official

* This chapter and Chapter 14 were written by Randolph E. Edwards of Southern Connecticut State College

¹Gustav E. Cwalsina, "Drug Use on High School and College Campuses," *Journal of School Health*, 1968, p. 639

²Edward N. Eisen, "Drugs and the Teenagers," *Philadelphia Inquirer*, March 13, 1963

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result can be extremely dangerous, even fatal. Overdosage and abrupt withdrawal can be critical and may lead to nausea, fever, hallucination, convulsions, coma, and even death. Often teenage abusers are ignorant of the potential danger.

Amphetamines. Better known as *bennies*, *co-pilots*, *footballs*, *dexies*, *hearts*, and *pep pills*, amphetamines are prescribed by a physician to reduce appetite and relieve minor depression. High school and college students are heavy users, particularly for late-at-night studying, the examination crisis, and various social functions. They are taken orally in tablet or capsule form, although the bona fide addict may inject them.

Teen-agers often take amphetamines to reduce their normal fears and inhibitions. This can result in reckless and dangerous behavior. Overuse may induce a sense of excitement and boundless energy. Prolonged usage can cause serious weight loss, hallucinations, and aggressive, antisocial behavior. Amphetamines do not cause physical dependence.

Cocaine Cocaine, a white, odorless powder that resembles crystalline snow, is extracted from the leaves of the coca bush. Although it can be taken orally, cocaine is usually sniffed or injected into the veins. Almost immediately a user will experience exhilaration accompanied by an acceleration of circulation and overconfidence in his capacities and physical strength. Large doses may produce hallucinations and feelings of persecution. Convulsions and death can occur from an overdose. Although there is little physical suffering from withdrawal, treatment is usually difficult because users are less conscious of their condition and seem to have less desire to be cured than do heroin addicts.

Hallucinogens Today there are between fifty and hundred drugs that fall into the hallucinogenic category. Marijuana falls within this group; however, it will be discussed separately because it is commonly used in amounts which do not produce severe delusions or hallucinations. LSD-25 (lysergic acid diethylamide) is the best known and most frequently used of the more potent hallucinogens. An amount of this substance no larger than the point of a pin is enough to send many people off on amazing hallucinogenic "trips." It is illegally supplied as a powder in capsules, small white pills, chewing gum, candy, and crackers. Slang names may identify it as *acid*, *cubes*, *pearly gates*, and *heavenly blue*.

A trip usually begins thirty to forty-five minutes after LSD is swallowed and can last up to twelve hours or more. Reaction usually depends on the person, his mood and dose, and on the setting. Abusers may undergo severe personality changes. They report seeing and "hearing" brilliant colors. Sensitivity to sound increases, and some objects may actually pulsate. Behavior can become irrational and psychotic, sometimes including suicidal or homicidal tendencies.

Users on bad trips may feel isolated from people and things; often the anxiety borders on panic. Medical treatment is necessary for those suffering

- *Escapism*. "Killing time" pleasantly; an escape from boredom in an unpleasant world.
- *Curiosity*. A desire to investigate substances which hold the promise of intriguing experiences.
- *Attainment of self-identity*. A need for more insight into one's real characteristics, goals, and capabilities.
- *Enhancement of creativity*. An effort to unlock one's potential for achievement.
- *Improvement of sociability*. A desire to reduce inhibitions and achieve greater intimacy.
- *Impotence with discomfort*. A tendency to seek chemical relief for any pain, physical or emotional.

These and similar reasons bring a high percentage of the nation's junior high and high school youth into contact with drugs. Although only a small proportion of these boys and girls become heavily involved, the resulting misery and waste of human resources is truly alarming. Many of the more serious cases undoubtedly result primarily from deep-seated emotional problems which cannot be remedied in the classroom. But regardless of the relative depth of the primary motives, ignorance of the dangerous characteristics of drug abuse serves to increase the possibilities of tragic consequences. In the words of a prominent presidential advisory commission, "An educational program focused on the teenager is the *sine qua non* of any program to solve the social problem of drug abuse."¹

Drugs of Abuse

Youngsters of junior and senior high school age who abuse drugs commonly experiment with such items as glue and other volatile chemicals, cough medicine, barbiturates, amphetamines, and marijuana. LSD, heroin, morphine, cocaine, and methadone ("speed") are much less in evidence, except in heavily drug-oriented communities. The specific pattern of drug abuse varies with the mood and social climate of a given region or community, and new substances are constantly appearing. To be effective, health educators must be aware of this ever-present potential for change even though it is virtually impossible to stay current with the specific properties of each new drug. Some of the standard drugs and drug categories are described in the following paragraphs.

Barbiturates. Barbiturates are medically prescribed to relieve tension, reduce excessive blood pressure, and induce sleep. Known by users as *red devils*, *yellow jackets*, *blue angels*, *rainbows*, and *goofballs*, these drugs are usually taken orally in either tablet or capsule form. They are often combined with pep pills, for a "seesaw" effect. When combined with alcohol the

¹The President's Advisory Commission on Narcotics and Drug Abuse: Final Report (Washington, D. C.: U. S. Government Printing Office, 1963), p. 17.

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The American quality is considerably weaker than the variety grown in Asia, Africa, the Near East, or Mexico.

Morphine A derivative of opium, morphine is a superb pain killer. Often called *dreamer* or *M*, it can be taken orally or by intravenous injection. General effects are sedation and calming; in large doses these symptoms can progress to coma and death from respiratory failure. It is used mainly by the bona fide narcotic addict.

Codeine. Often called *schoolboy*, codeine is the weakest derivative of opium and is less addictive than heroin or morphine. Kick-seeking youngsters will drink cough syrups containing codeine in an attempt to achieve mild intoxication. Its alcoholic content may also present a problem, particularly if the consumption is ample and regular.

Heroin. Although closely related to morphine, heroin has no medical usage, but at least 60,000 Americans are addicted to it. Also known as *H*, *horse*, *hard stuff*, and *junk*, it has long been the overwhelming favorite among opiate addicts. It is usually cooked into a solution and then injected into a "raised" vein. A user soon goes "on the nod," becoming sleepy and drifting in and out of daydreams. He usually becomes addicted and often takes the drug daily for a week or ten days. When this occurs, his judgment, self-control, and attention deteriorate rapidly; this is accompanied by loss of appetite and weight. Deprived of heroin, an addict will develop symptoms resembling those of severe influenza, such as chills, sweating, watering eyes, running nose, and restlessness. In a few cases where addiction is heavy, these withdrawal symptoms may become severe and life threatening.

Specific signs of heroin addiction include constricted pupils and white needle marks or reddish scabs on arms, thighs, or other parts of the body. School personnel might be suspicious of a youngster who shows a sudden worsening in academic ability, marked increase in absenteeism, the wearing of long sleeves in hot weather, and overly frequent visits to the lavatory.

Volatile Chemicals Volatile chemicals have been covered previously, in Chapter 14, pp. 291-292. Although not classified as drugs or narcotics, volatile chemicals are prime factors in leading youngsters into greater experimentation with dangerous drugs. They are often the first step toward addiction. Airplane glue, gasoline, lighter fluid, and paint thinner are the more popular products sniffed or inhaled. Inhalation of Freon, a commercial product used for refrigeration, has killed youngsters by freezing their larynxes and respiratory systems.

OVERVIEW FOR THE SECONDARY LEVEL

Currently, school administrators and educators are searching for more effective programs of drug-abuse education. It has become increasingly evident that most teenagers have considerable information, and misinformation, about drugs. However, they will usually respond to a balanced

mental disturbances. Medical evidence has shown that LSD induces chromosome breakdowns, which may lead to physical or mental abnormalities in chronic users or their offspring.

Hallucinogens other than LSD and marijuana include the following:

- *DMT* (dimethyltryptamine). A powerful drug similar to LSD; effects last several hours.
- *Mescaline*. A drug made from the buttons of a small cactus plant and supplied illegally as a powder or liquid; effects last ten to twelve hours.
- *Peyote*. A less concentrated form of mescaline.
- *Psilocybin*. A drug synthesized from Mexican mushrooms and supplied in crystal, powder, or liquid form.
- *STP* (also known as *DOM*). A synthetic chemical related to mescaline and amphetamines; extremely mind distorting.
- *Morning glory seeds*. A substance containing a drug closely related to LSD but far less potent.

Marijuana. Which drug is used the most, causes the most trouble, and has the greatest social attraction? The answer is easy—marijuana, by a wide margin. It is inexpensive and readily accessible, particularly in or near large cities. Marijuana traffic has increased tremendously in recent years. Only a few years ago marijuana smokers would be caught with a few cigarettes. Today they are often apprehended in possession of pounds of marijuana.

Also identified as *grass*, *tea*, *weed*, *Acapulco gold*, *joint*s, *sticks*, and *reefers*, marijuana is the dried flowering top of the hemp plant and is usually smoked in cigarettes or pipes. It grows wild in many parts of the United States and is easily cultivated. Occasionally it is made into candy, sniffed in powder form, mixed with honey, and even mixed with butter and spread on bread. Cigarettes are hand rolled, thinner than the commercial variety, and are twisted on both ends.

Most smokers experience feelings of elation, exaggerated sensory perceptions, and distorted measurements of time and space. They may become talkative or may drop into a dreamy state. Ideas may flow rapidly, often in disconnected fashion. Users may appear mildly intoxicated and stare off into space with a glassy-eyed look.

Smokers may develop a psychological need for marijuana, but it is not physically habit forming. Discontinuance of use does not cause physical withdrawal symptoms. Users can lose restraint and act in a manner dangerous to themselves and/or others. Marijuana can, and often does, serve as a first step to more serious drugs, particularly heroin.

Often overlooked when evaluating the use of marijuana is the variety of quality available. Its strength varies greatly, depending on where and how it is grown, how it is prepared for use, and how it is stored.

on Public Health and Welfare in March, 1968.⁶ A vital ingredient to effective drug-abuse education is the establishment of authoritative teachable curriculum for all grade levels. There is voluminous material available (medical and law-enforcement, in particular), but it must be made useful and practical to trained and knowledgeable teachers. They desperately need a structure for information and teaching, particularly for this new subject of narcotics and dangerous drugs.

Although it is relatively easy to outline the general characteristics of needed programs for drug-abuse education, it is considerably more difficult to identify the specific procedures. Few things are simple where drug abuse is involved and those persons who attempt to implement programs must be prepared for frustration and a slow rate of progress. The following suggestions by Hester Beth Bland may be used to minimize the initial problems.

1. Start with simple objectives that will develop understanding appreciation that

- a. Drugs, when properly used, are essential to the preservation of health, comfort, and life.
- b. Drugs are powerful agents.
- c. Drugs, when improperly used, are potentially dangerous.

2. Place the subject in its proper perspective. It is an important subject, but so are a dozen other subjects in health.

3. Include drug education in the regular course of study, e.g., health, biology, and social studies.

4. Plan the curriculum carefully at the local level, and prepare those who will teach the subject.

5. Select timely and valid references.

6. Limit the scope of the subject. Do not attempt to teach a course in pharmacology. Such an attempt at in-depth teaching is unwise for anyone not qualified. A generalist—the health teacher—in most cases can prepare himself sufficiently to teach the basic fundamentals about the benefits and dangers of drugs.

Do not glamorize, sensationalize, or moralize when teaching about drugs. Stick with the facts; facts are eloquent enough.⁷

At the junior high level particular emphasis should be given to instruction concerning the nature and effects of harmful substances. Experiences should be provided that will enable young people to grow in understanding them-

⁶Randolph E. Edwards, 'Education-Youth-Drug Abuse,' testimony presented March 19, 1968, House of Representatives, 90th Congress, Washington, D C

⁷Hester Beth Bland, 'Problems Related to Teaching About Drugs,' *Journal of School Health*, Vol XXXIX, No 2, February, 1969, p 119

approach, one that is open, is scientifically accurate, and presents all sides of the argument fairly. Students respond positively if the issues are presented with candor and a knowledge of the facts. This is particularly true in communities where drug-abuse activities are a part of the teen-age atmosphere.

Teacher Role

The key to meaningful drug education is the knowledgeable teacher's attitude and approach. Realizing that most students are critical, discerning, and quick to spot hypocrisy, the teacher should present and discuss material in all of its aspects and dimensions, whether desirable or undesirable. Censure and negativism usually result in an almost complete communication breakdown. If the reliability and/or sincerity of the instructional source (teacher or material) is doubtful, adolescents tend to reject it. Nowhere is this more true than in the area of drug-abuse instruction.

Credibility

Teacher credibility is enhanced by a willingness to admit to gaps in knowledge. Students should be made aware of the varying opinions and disagreements that exist among experts in all phases of the drug-abuse problem. Methods of treatment and rehabilitation, procedures for controlling illegal drug traffic, legalization of marijuana, and legal equating of marijuana with heroin are currently prime areas where diverse expert opinions exist. Research, experimentation, and further evaluation are necessary before decisive conclusions can be determined and generally accepted. Knowledge of facts and ability to present them are essential to strengthening the teacher's credibility with students. In a subject-matter area where students often possess more specific information than their teacher, honesty and forthrightness are essential ingredients of effective instruction.

INSTRUCTIONAL CONSIDERATIONS

Effective drug-abuse education should be taught by knowledgeable and professionally trained instructors. Special programs and expert guest speakers can successfully augment classroom instruction, but they should not replace it. Expensive books, films, pamphlets, and so on, are of little use to an educator who is uncomfortable with the subject. Lacking sound preparation, many teachers will naturally avoid the controversial matter of drugs and their abuse.

Ultimately, effective drug-abuse instruction should be structured as a continuum of learning through the school experience of the child. This necessitates a skillfully structured curriculum that provides essential content information, instructional procedures, teaching materials, and evaluation techniques. The great importance of curriculum to effective and productive instruction was emphasized before the House Subcommittee

to have an effect include the community setting, home situation, parental relationships, and peer-group influences. The development of an appreciation and understanding of these influences and motivations can help the individual control any tendencies he may have toward drug abuse.

2. *Drug-abuse involvement and arrest may portend serious future complications for the teen-ager.* One's acceptance or rejection by colleges; medical, law, or other graduate schools; government agencies; and so on, may be affected adversely by a police record.
3. *When properly used most drugs are beneficial to mankind.* Drugs are valuable in the relief of pain and suffering and have been instrumental in increasing life expectancy.
4. *The term narcotic refers principally to opium and its derivatives.* Heroin, morphine, and codeine are the principal narcotics. In varying degrees they can induce sleep, relieve pain, and cause drug dependence. Their abuse is one of the most dangerous of all drug-abuse practices.
5. *Marijuana lacks medical value, and its use can be both dangerous and illegal.* A highly controversial drug, marijuana is enjoying steadily increasing popularity among young people. Its varying physiological and psychological effects can be dangerous and complex. The legalization issue requires knowledge of all the controversial facts.
6. *The abuse of narcotics and dangerous drugs creates major health and social problems.* A significant relationship exists between drug abuse and such factors as crime, delinquency, and attitudes toward school. Physical health may be adversely affected by drug abuse.
7. *Standards for acceptable behavior are greatly dependent upon the guidance of emotional and social development.* Building character strength is a vital consideration. Emotional guidance requires gentle firmness and/or the "velvet glove." Constructive utilization of individual resources demands encouragement and direction.
8. *The control of drug abuse is a difficult and constant task.* Local, state, and federal agencies are attacking the problem in various ways. International control of narcotics requires great effort by many countries.
9. *Treatment and rehabilitation of drug dependencies is difficult, expensive, and time-consuming.* Federal, state, and community facilities are currently inadequate. Many problems and controversies exist concerning medical treatment and rehabilitation techniques.
10. *LSD and other potentially dangerous hallucinatory drugs are unpredictable in their effects on the user.* Hallucinogen users can develop a serious form of psychological drug dependence. LSD is a very potent drug that is still undergoing intense investigation.

selves and their behavior. The influence of peer group pressure needs to be closely examined. Growing independence calls for increased responsibility in the acquisition of knowledge, development of wholesome attitudes, and employment of sound practices that will aid students to resist the use of any harmful substances. Instruction should be geared to provide students with the opportunity to acquire the practical knowledge they need and the answers to many of their puzzling questions.

Constructive group activities will enable students to understand and appreciate responsible citizenship. Individual guidance, whether needed for meeting and solving problems or for the recognition and direction of young people with personality and adjustment problems, are matters of concern during these formative years. There should be an opportunity to learn and develop leisure-time skills.

Students of high school age should learn to view their personal health problems within the structure of modern society and recognize their obligation to conduct themselves in a responsible fashion. Students might discuss and develop a set of principles designed to guide behavior in terms of responsible citizenship in their community, and particularly among their peers.

The entire subject of narcotics and dangerous drugs should be covered during the high school years. The full impact of the drug-abuse problem should be presented in a logical and frank manner. Responsible educators must not discourage youth from asking questions and questioning answers. Most teen-agers are inadequately informed about drugs and will respond positively to an open, factually oriented approach that respects their right to possess this significant information and their ability to handle it in a responsible manner.

Finally, and perhaps most significant, is the instructor's knowledge, interest in the subject, concern for the problem, and rapport with students. Today's youth is quick to disregard a teacher when there is little respect for his knowledge and know-how in the area of drug abuse.

Suggested Concepts

The concepts suggested in this chapter are vital to drug-abuse instruction at the secondary level. They are not intended to be all-inclusive. Omissions will be apparent, particularly in terms of local needs and situations; however, the author feels that these concepts represent a fairly comprehensive sampling of the drug-abuse concepts that should be included in secondary health education curricula. Their implementation requires translation into language and situations appropriate to the age and grade level involved. The instructor should select those concepts that will best meet the goals of the local program.

1. *The abuse of drugs stems from a variety of factors.* Factors that seem

their topic of interest. This will undoubtedly ensure greater individual participation.

Negative statements are taboo. Group members are instructed to offer any ideas that come to mind; "free-wheeling with wild ideas" is to be encouraged. Quantity rather than quality is the main concern here. Criticism of an idea is not allowed during the session.

Instructions should be given clearly, with emphasis on quantity and combination of ideas. The problem or problems under consideration must be introduced and the students must be primed and stimulated with a variety of approaches. Quick thinking and rapid-fire contributions are the essence of the activity.

This brainstorming session might well begin with the teacher discussing the total marijuana problem in something like the following.

We all know that pot is growing in popularity among young people. You know that it is probably being smoked by some of your friends right here in this school. Marijuana is a highly controversial drug and there is much misinformation concerning it. Even many of the experts disagree on a number of important points. Do you feel that it is worthwhile to learn some of the accurate facts, to understand just what pot can and can't do to and for you? Are you ready and willing to accept it as a part of your life? What are your thoughts as to the desired role that pot might play in the life of your friends and associates?

Following this introduction the class is asked to begin their brainstorming. Beginning sessions should not last too long, eight to twelve minutes is ample time.

BRAINSTORMING THE QUESTIONS

Student ideas and comments will vary according to type of community, economic status, familiarity, and experience with marijuana. Where multiple groups are functioning there may be a lessening of inhibitions, because the teacher can sit in on only one group at a time. With the entire class working on a single problem a student may feel inhibited simply by the presence of all classmates and the teacher. Some students will want to "see how it goes" before making a contribution.

The following ideas and comments advanced by these students are indicative of early teen-age awareness of the marijuana problem.

Problem I *Why is marijuana so popular among teenagers?*

- You can buy it almost anywhere.
- It's easy to hide.
- It makes you feel great.
- It's not addicting.
- Alcohol is a lot more dangerous.
- It means getting together with the crowd.

PRACTICAL APPLICATIONS: SECONDARY LEVEL

In this section examples of instructional techniques, each related to a concept and relevant content material, will be presented. The four concepts described in the following teaching situations can be effectively used at most secondary grade levels. Such variable factors as type of community, experience, and maturity of students must be considered by the teacher in selecting appropriate concepts. At the secondary level there should be greater emphasis on factual content and responsible attitude development through intelligent discussion and varied research techniques.

I. Going to Pot?

Marijuana is a highly controversial drug. Continued research is needed to probe its many facets. It has been said that we know less about marijuana than any other commonly abused drug, which is reason enough for students to consider well before they use it.

Concept: Marijuana lacks medical value, and its use can be dangerous as well as illegal.

Pupils: Eighth and ninth grades.

Technique: Brainstorming, with variations.

Brainstorming as a teaching technique is extremely useful for getting students to express their real feelings concerning specific health issues. It can be used to develop interest early in a unit of study, or as in this example, to stimulate free expression of facts and opinions once the class has gained some familiarity with the specific problems. The research, individual study, and group discussion of our hypothetical ninth-grade class has resulted in the formulation of five major questions.

1. Why is marijuana so popular among teen-agers?
2. What are the actual physical and psychological effects of smoking marijuana?
3. Is smoking marijuana a stepping stone to heroin and narcotic addiction?
4. Should the use of marijuana be legalized?
5. What does smoking marijuana mean to me now and in the future?

ESTABLISHING THE RULES

Because there are five problems to be dealt with, the class will be divided into five groups, each with one student to record ideas as they are presented. If the ideas come too fast, it may be necessary to use two recorders, with each one jotting down alternate ideas. With five topics being discussed, students will want to choose the group dealing with

general class discussion. In this case each group summarizes and decides on the best ideas for class consideration. It is here that the teacher's interest in and knowledge of marijuana and other drugs becomes so important. This final discussion and summary should endeavor to leave the students with the following:

1. Some accurate and pertinent facts.
2. Unanswered questions that indicate further reading, discussion, and study.
3. A critical attitude toward such issues as:
 - a. Whether to try it just for kicks.
 - b. One's responsibility to oneself and one's parents, brothers and sisters, and friends.
 - c. Its illegal status.
 - d. Whether there is a good reason for smoking pot.
 - e. How important it is to follow the crowd if they are trying pot.

The newly gained knowledge and broader perspective resulting from this activity should enable the students to evaluate their responsibilities better and make intelligent decisions. Brainstorming should be lively, and it can be fun. Students are encouraged to think creatively and speak rapidly in an atmosphere that is nearly free of criticism and mockery.

Another effective and interesting technique for summarizing and evaluating the ideas presented could have each group decide which ideas and observations are the most important and meaningful to them. If some forty ideas per group have been advanced, condense the list down to eight or ten. Each group will retain its final selections, then pass the longer original list on to the next group for its appraisal and subsequent condensation. The result is a composite of significant thoughts and ideas that should become an integral part of each student's notebook. The more meaningful ideas may also be portrayed to the class through use of an impromptu debate. Two students are selected to present one pertinent fact and/or point of view. This can be extemporaneous or quickly prepared, perhaps overnight. To be particularly effective this dialogue should be unrehearsed and the two students should take their cues from each other. Youngsters with diverse attitudes and opinions who are willing to air them in open forum will add markedly to a creative learning situation. Other students in the listening audience will be constantly evaluating their own thoughts and beliefs.

11. Be Smart—Play It Safe

Many drugs are extremely valuable to modern medicine. They are used in various ways for the relief of pain and suffering. A number of

Problem II *What are the physical and psychological effects of smoking pot?*

- Eyes get red and pupils dilate.
- Smoker laughs and giggles.
- Some users talk loudly and a lot.
- Mouth may become dry.
- Eyes are very sensitive to light.
- Some become nauseated and vomit.
- Smoker feels good mentally, as if "floating on air."
- Smoker is very moody and changes mood easily.
- Smoker loses judgment.
- Some feel very excited.

Problem III *Is smoking pot a stepping stone to narcotics addiction?*

- It could be.
- Not too often.
- It happens to just a few teen-agers.
- Addicts-to-be would have gotten around to heroin anyway.
- Most heroin addicts have used pot.
- If you use one drug it's easier to use another.

Problem IV *Should the possession and use of marijuana be legalized?*

- Legalization would eliminate illegal traffic.
- If it's not too dangerous, why not?
- Legalization would add another questionable drug to a growing list.
- The stronger hashish might become popular, and the effects could be very dangerous.
- Legalization would increase use.
- If legalized it would probably come under laws similar to those for alcohol.

Problem V *What does smoking pot mean to me now and in the future?*

- It sounds like fun.
- I could go to prison.
- I don't believe it would hurt me.
- It's part of growing up.
- It sure would shock my parents.
- It's not really a big deal.

EVALUATING THE IDEAS

When the stipulated time is up, all brainstorming activity ceases and evaluation of ideas takes place. The most common method is

- D. Describe how the body functions as a chemical factory (e.g., hormones, cozymes, and so forth).
- E. What are the basic uses of drugs?

II. *Prescription Drugs*

- A. What are the criteria for placing a drug in the prescription category (e.g., usually powerful, potentially dangerous, and so on)?
- B. How do the laws governing prescription drugs apply to the physician, the pharmacist, the dentist, and the patient?
- C. What information is required by law to be placed on the label of prescription drugs (e.g., name of patient, name of doctor, directions, and so on)?
- D. Investigate the education and training of pharmacists.
- E. What are the basic uses of drugs?

III. *Central Nervous System Drugs*

- A. For each class of drugs that affect the central nervous system provide:
 - 1. A standard definition.
 - 2. A list of common examples.
 - 3. A description of the basic effects.
 - 4. A description of important medical uses.
(Provide this information for narcotics, barbiturates, stimulants, hallucinogens, and tranquilizers.)
- B. Which of the central nervous system drugs are commonly abused? How serious is the problem for each drug? What general groups of people seem most prone to abuse drugs?
- C. What are the apparent reasons for drug abuse (e.g., lack of self-confidence, discouragement about the future, emotional problems, and so forth)?
- D. What kinds of problems result from drug abuse for the individual, the family, and the community?
- E. What is done to prevent and control drug abuse by law-enforcement authorities, medical personnel, educators, reformed abusers, religious workers, and others?

Other major topics might include over-the-counter drugs, the advertising of drugs, and drug research and development. Similar groups of guiding questions could be formed for the use of the student committee assigned to each topic. If students of low academic ability are involved, the questions should be broken down into a greater number of simpler and more specific questions. Conversely, bright, enthusiastic student groups may need little more than a clear verbal description of the scope of their topic.

these sedative and pain-relieving drugs may be purchased over the counter or by a doctor's prescription. They can be beneficial if used with caution and an awareness of their potential to cause dependency. It is important to remember that *any* drug may be poisonous if misused.

- Concept:* When properly used most drugs are beneficial to mankind.
- Pupils:* Seventh, eighth, and ninth grades. Depth of involvement will depend on previous background, age, and grade level.
- Techniques:* Committee research, varied panel reports, spontaneous acting, colloquium.

The initiation of a committee work assignment in the typical eighth-grade class would logically take place on the second or third day of a unit on drugs after the class had been provided with the opportunity to develop some general orientation to the topic. Particularly interesting films or resource speakers are effective ways of developing the necessary enthusiasm for this rather demanding task. Following this, the teacher may proceed directly by listing a number of subtopics or study areas on the chalkboard (or have them already mimeographed and ready to hand out). The class should then be divided into committees for purposes of investigating and reporting on these areas. Insofar as possible students should be allowed to select the committee of their choice. Some committees may choose to cover two closely related areas and they should be allowed this option if the teacher feels the committee members are capable enough.

STUDY AREAS

Each study area is presented together with a series of questions or directives which serve to define the scope of the area and guide the work of the student committee. These may call for concise answers or for broad, open-ended discussions. Regardless of their specific form, they should effectively guide the committee to the important points. Three examples of these study outlines follow:

I. *The Nature of Drugs*

- A. Check several authoritative definitions as found in standard dictionaries, medical dictionaries, and related textbooks.
- B. What are the common drug categories? Provide several examples from each.
- C. What are the main drug sources (e.g., plants, laboratory culturing and synthesis, and so forth.)?

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Creative teaching
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artment of the Treasury. (Having researched the
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Department is no longer involved. On April 8, 1968,

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Abuse Control [F.D.A.] combined to form the Bureau of
Narcotics and Dangerous Drugs [BNADD] under the aegis
of the Department of Justice.)

- A good way to study is to take a pep pill. (This can be a debatable issue. Many students, usually those in high school and college, function quite efficiently when they feel the occasion demands artificial assistance.)
- The pharmacist will be glad to diagnose your ailment and prescribe the correct medicine.
- Vaccines are drugs that come from animals.
- Misuse of aspirin can lead to trouble. (For a change of pace the moderator may involve other members of the class in the discussion.)

A valuable feature of this technique is that when the student takes a stand, he must know the facts and be able to defend his opinions. Whenever personal experience can be utilized, it should be employed with conviction. Disagreeing committee members should be heard, and there should be a reasonable amount of participation from the main body of the class.

Act a Role. One of the committees has expressed a desire to depict important facts resulting from its research efforts through some form of dramatization. The members may work singly, in combination, or in small groups as they plan their presentation. Acting may be a monologue, pantomime, or short skit. Any costume, stage props, and so on that can be used will add to effectiveness and realism. Acting portrayals could include the following:

- A sick patient reads aloud from a label on a real bottle of pills or medicine and wonders about some of this information.
- A pharmacist behind the counter explains to an annoyed lady why he cannot sell her a drug without a doctor's signed prescription.

INFORMATION GATHERING

The manner in which the committee members gather the information needed to gain a reasonable degree of mastery over their topic will vary considerably according to specific situations. However, visits to local pharmacies, interviews with nurses and doctors, where practical, and surveys of the contents of home medicine chests are common supplements to the usual library sources. Generally a minimum of one week will be required to carry out these activities. In many situations a longer period of time will be needed, particularly where the health class itself meets only once or twice a week.

REPORTING TECHNIQUES

There are several interesting and effective techniques which may be used by the committees as a means of sharing their information with the other members of the class. These should be described to the class early in the unit to facilitate the planning of the reporting phase. The teacher should be ready both to help individual committees with the standard techniques and to provide encouragement to those groups who chose to improvise or create novel ways of conveying the gathered information. Some of the more promising alternatives will be described here.

Question the Experts. Each committee forms a list of significant questions pertaining to their issues. Copies are handed to class members so that they may quiz the committee members who will be sitting in panel fashion in front of the class. Any panel member may receive the question, and any of his associates may feel free to contribute additional information. Experience has shown that student panel members, realizing their responsibility, will study the questions and be prepared to respond in knowledgeable fashion. The teacher, at his discretion, may check the questions for wording and intent. However, as far as possible, this is an activity by and for the students, and they should be allowed to run the show. Sample questions might include the following:

- Are all drugs sold on prescription?
- Name one law pertaining to dangerous drugs that your state, city, or community has passed.
- Is a drug different from a medicine?
- What are the "wonder drugs"? Why are they so named?
- What are the basic characteristics of the central nervous system drugs?
- Once a drug is cleared for sale in the United States by the F.D.A., can it ever be taken off the market?

Take a Stand. Each committee member makes a short list of im-

portant statements. They should be brief, factual, and to the point. It is also necessary that several statements must be false or questionable. A moderator is then selected, preferably a capable youngster from another committee rather than the teacher. Committee members, in turn, will field a statement from the moderator and take a stand on its validity. Sample statements might include the following.

- Federal narcotic laws are enforced by the Bureau of Narcotics, U.S. Department of the Treasury. (Having researched the subject of protecting society this committee is aware that the Treasury Department is no longer involved. On April 8, 1968, the Federal Bureau of Narcotics and the Bureau of Drug Abuse Control [F.D.A.] combined to form the Bureau of Narcotics and Dangerous Drugs [BNADD] under the aegis of the Department of Justice.)
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Take a Stand. Each committee member makes a short list of im-

A representative from each of the preceding would probably be too large a group for the classroom. Therefore, the teacher should talk with prospective guest panelists, define objectives, and then select the most appropriate group possible.

Students should select the members of their panel and this panel should be seated with the guest panel before the class. Student panelists should be armed with pertinent questions and issues for discussion. Resource panel members serve in this situation as consultants and contribute their opinions and knowledge on various aspects of the subject. A competent student moderator may guide the panel discussion and encourage the class audience to participate whenever it desires.

This technique puts the students on an equal footing with the experts and stimulates attention and participation. Students are prone to ask objective questions in the hope of receiving direct answers in return. Discussion with and among the resource persons may well serve to clarify questionable issues. Selecting experts who can communicate with teenagers and understand their concerns will assure the success of this stimulating activity.

III. The Consequences

With modern society experiencing extreme difficulty in coping with drug abuse, high school seniors should be well aware of the major health and social problems involved. For those graduates continuing on to higher education this has particular significance, as our colleges and universities have become hotbeds of indiscriminate drug abuse.

- Concept:* The abuse of narcotics and dangerous drugs creates major health and social problems.
- Pupils:* High school seniors.
- Techniques:* Projective techniques and variations.

By the time today's youngsters become high school seniors they are reasonably familiar with many aspects of the complex drug-abuse problem. Prominent among the reasons for this are the following:

1. Inclusion of drug-abuse education in school curriculums.
2. Increased emphasis in the entertainment media, particularly television and movies.
3. Greater coverage in the news media.
4. Growing abuse of drugs in the suburban and smaller urban areas.
5. Social patterns and habits of today's youth which involve various forms of drug abuse as a natural circumstance.

- A mother is examining her bathroom medicine chest and attempts to clean out old and partially used bottles of drugs and medicines. Labels are peeling off two bottles currently in use and transparent tape is applied. (A running commentary is apropos here as she examines all bottles and containers.)
- A customer explains to a pharmacist about his aches and pains and wants to know what he should take. He eventually decides to prescribe for himself and buys some drugs. A physician who happens to be listening nearby shakes his head and makes several comments after the customer leaves.
- A girl is thinking about taking pep pills while studying for a test. Her "conscience" answers as she wonders out loud. (Her conscience is out of sight behind a desk or screen.)
- Three of four teenagers are sitting around discussing "blowing some pot or popping a pill." There is some "big talk" from these inexperienced drug users. The conversation swings around to getting caught, being kicked out of school, and the possible consequences of a police record.

The possibilities for spontaneous acting are numerous. Impromptu speaking and acting encourage creativity. Youngsters will appreciate the opportunity and challenge to use their imagination and creative ability. The class audience will benefit as it seeks to interpret the meaning of the presentations. Experience has shown that the teacher may be amazed at what his students have learned, can appreciate, and can produce interpretatively.

Form a Panel. The standard symposium is a very traditional yet very effective way for a committee to present its findings to the class (see pp. 126-128). It also lends itself to some interesting variations when suitable resources are available. One example of these involves the participation of two panel groups. One panel should be composed of interested and intelligent class members who are likely to ask appropriate questions and make relevant comments; the other panel should be made up of resource persons selected for their knowledge as well as interest and concern. Possible choices for this panel may include the following:

1. School or local physician.
2. School nurse.
3. Faculty member in the areas of science, chemistry, health and physical education, or home economics.
4. Parent.
5. Drug manufacturer.
6. Law-enforcement officer.
7. Former drug abuser (preferably a young person).

PICTORIAL TECHNIQUE

Pictures related to any of the problems and issues are shown to the students, who are to compose extemporaneously a story to fit each picture, reveal what has led up to the event shown, describe what is currently happening, relate how the characters feel, and predict or state the outcome. Picture examples might include the following:

1. A teen-ager sitting at a lunch counter, head buried in his arms, has "nodded out" after gulping down several pills and a cup of tea. A policeman standing at his elbow is trying to rouse him.
2. A boy and girl meeting after dark in a deserted parking lot. The girl is buying her "kicks" from a teenage pusher.
3. A boy and his girl are at a swinging party. Several friends are offering them marijuana.
4. High school senior in a serious discussion with his guidance counselor; the discussion seems focused on academic records and both parties look distressed.

Imagination and creativity should blossom with this technique. Students will have an opportunity to express their feelings in their own ways.

VARIATIONS

1. Students may bring in their own pictures as selected from magazine advertisements and other similar sources; the projections themselves should be unrehearsed presentations by other class members.

2. If there is sufficient artistic talent and enthusiasm, these students might be encouraged to draw or sketch their own picture or scene. Others should then be called upon to describe their interpretations.

3. A truly creative twist could be accomplished by having one or more willing students set up their own scene with a camera. This can be one picture or a series of pictures designed to offer a variety of opportunities for extemporaneous interpretations.

4. A class member could briefly describe a conflict situation or an unfinished story or plot; several of his classmates could then finish the story as they see it within a specified time. This may be effectively followed by questions from the class as to why each narrator chose a particular approach or made certain statements.

5. It would be a fine experience for the students if the teacher could procure a top-notch sociologist, psychologist, or psychiatrist for a guest appearance. Ideally, this expert would sit in on a session of the projective-technique activities and contribute his professional evaluations. It would be advisable to stage a number of shortened demonstra-

TAKING A LOOK

High school seniors typically look upon themselves as a rather sophisticated group. They may give little thought to personal health and social problems that can result from the indiscriminate use of drugs. After all, who thinks about negative future possibilities when partying on Saturday night or "blowing a stick" (smoking marijuana) quietly by oneself?

Although high school seniors may admit that they have their "hang-ups" concerning drugs, they do not appreciate being preached to on the subject. However, they are often curious and intelligent enough to realize that it is to their advantage to view the drug-abuse problem as one that could affect them. These positive qualities can be utilized with a proper teaching approach. Following a particularly lively discussion, the hypothetical teacher in this example made two suggestions as follows:

1. The class should develop a list of drug-related health and social problems and/or issues that may affect them now and in the future.
2. These problems and issues should be discussed through a series of informal and spontaneous *projective techniques* with all students participating.

Through use of the projective technique students will be encouraged to discuss some of their personal and social problems, opinions, and ideas. This technique can be valuable in assisting students to evaluate better their attitudes and beliefs and in aiding them in solving problems of personal and social adjustment.

PROBLEMS AND ISSUES

Some of the major problems that might be listed are as follows:

- Possibility of arrest, including a jail term and police record.
- Interference with academic work, with reduced chance of graduation and college placement.
- Disruption of relationships with peers and friends with differing patterns of use or nonuse.
- Disruption of family relationships with parents and other members.
- Possibility of death or permanent damage.
- Disruption of personality development resulting from long-term preoccupation with drugs and the neglect of other goals.

As these and similar items are proposed and briefly discussed they are left on the chalkboard for reference during the projective phase of the lesson.

ally experiencing drug-related problems and in many cases by participants in self-help programs designed to help other abusers live drug-free lives. Each of these kinds of speakers has his advantages and limitations and the effectiveness of persons within each group will vary greatly depending on the personal qualities of the individual.

VISITING EXPERTS

One commonly used source of speakers in the expert category is the district offices of the Federal Bureau of Narcotics and Dangerous Drugs. Offices of this agency are located in every section of the United States. Speaker representatives from this agency are knowledgeable in most aspects of the drug problem and will emphasize any area desired by the teacher. After an authentic picture of what is involved in controlling narcotics and dangerous drugs, students can direct their concentration in areas of interest and choice. Other potential sources of speakers are the following:

- Customs office.
- Post office.
- F.B.I.
- Border patrol.
- Coast Guard.
- Police, state and local.
- Shipping and transportation companies.

All of the preceding could render a specific contribution. If possible, one or several of these experts should follow the federal agent. The invitation and speaking arrangements could be a part of the study assignment for various students in their particular area of interest.

REFORMED ABUSERS

The reformed abuser can bring a high degree of realism and candor to a class discussion on drugs. When this alternative is selected it is vital to obtain the very best person possible. He must not be too much older than the students in the class. The age association and identification factors are strengthened if the age differential is minimal. The teacher must be as prudent in his selection as possible. Unless the teacher happens to know of the right person, he may wish to try several *rehabilitation centers*, usually located in or near large cities, such as the following:

- Synanon.
- Narcotics Anonymous.
- Halfway House.
- Teen Challenge.

tions in order to cover a variety of student experiences and attitudes. The guest expert should be a person who understands today's teenagers and can communicate with them.

GENERAL HINTS

The projections that students describe can often be dealt with on two levels. In the first instance the student is developing a narrative based on his basic knowledge of the factors involved and his impression of what the teacher and/or his classmates want him to say. This sort of response, although somewhat superficial, is the more common one and is useful as a means of examining and discussing student views of specific topics. However, a second possibility exists. Student reports are occasionally dominated by strong emotional needs to see certain aspects of a situation or block out others. If this should result in bizarre interpretations, the teacher should realize his or her limitations and generally not attempt any sophisticated analysis of the report. If the student involved shows other unusual symptoms, a referral to school guidance personnel might be advisable.

It should be noted that the projective technique can easily wander off target and become meaningless play. In order to keep specific goals in sight, the pictures or narratives must be of reasonably high caliber and directed along a central theme.

IV. A Distinguished Visitor

The legal approaches to prevention and control of drug abuse constitute some of the more intriguing yet least publicized aspects of the entire drug problem. Both the international smuggler and the small-town, back-street pusher recognize law enforcement as the bane to profit and illicit commercial expansion. Prevention and control also include federal, state, and local legislation regarding importing, manufacturing, distributing, purchasing, and possession of drugs of all types, both legal and illegal.

Concept: The control of drug abuse is a difficult and constant task.

Pupils: Senior high school.

Technique: Resource speakers.

The various types of persons that make effective resource speakers for drug education may be divided into two basic categories. The first group includes all those whose specialized training and job experience has provided them with special expertise in the drug areas. Many psychiatrists, pharmacologists, and specially trained law-enforcement personnel are found in this category. The second group is composed of reformed drug abusers who gain their special knowledge by person-

details pertinent to the visit should be clearly outlined beforehand. If these details are not handled properly, it is quite possible that someone will complain that children are being exposed to the evil influence of drug addicts and criminal characters. Even when the best precautions are taken, this may happen.

Upon learning of a teacher's idea for a guest speaker, administrators and other teachers may wish to build the affair into a large assembly presentation. The teacher should generally avoid this. His students have studied about marijuana; they know something about the problem and are ready for the guest speaker and his message. All-school assemblies have their place; however, outside speakers generally make a more lasting impact when they deal with smaller groups, where the opportunity for real communication is greater.

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- Daytop Village.
- Encounter.
- SODAT (Service to Overcome Drug Abuse Among Teen-agers).

Based on the self-help, informal-group theory, these nonprofit organizations provide assistance for the addict and youthful drug abuser through counseling, education, and vocational and cultural training. Development of the individual personality is a major objective.

Many of these and other similar organizations have organized speaker bureaus from which a school district may obtain an ex-narcotics addict and/or youthful drug abuser. In this situation the teacher should state the type of person he is seeking and the characteristics of the audience. For someone to come in and simply recount his experiences with marijuana is not sufficient. He must be able to relate to his younger audience, to recognize their curiosity, uncertainty, and need for answers. He should understand that many students will look upon him with curiosity and awe, and some with adulation.

Thus, it is important, if not imperative, that the teacher take the time and effort first to meet the guest speaker and brief him on his role. Invitations, acceptances, and a general briefing by telephone or letter are not recommended. The teacher should show his speaker the problems and questions that his class has raised. Explain that for many of these students this is probably the first time they have even met an ex-addict, marijuana smoker, or whatever the case may be. The need for an honest impression based on truth as the speaker knows it should also be stressed.

The students, of course, should have the opportunity to ask questions and promote informal discussion with their guest. He in turn may be briefed to ask for questions and opinions from his audience. This special activity should not be hurried. An interesting follow-up activity is student discussion of their reactions. This may occur immediately after the guest's departure. However, it may be more fruitful to have a summary discussion the next day, after everyone has had an opportunity to digest what they have heard. The teacher might also ask what new thoughts and changes in philosophy have resulted from listening to one who has experienced drug abuse.

COMMON PITFALLS

It goes without saying that comprehensive drug-abuse education should have the sanction of the home and school system. If a creative instructor decides to expose his students to an admitted ex-user of harmful drugs, he should procure official permission. Similarly, the

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Disease and Environment: Elementary Level

Throughout mankind's existence, disease has always been its ultimate enemy. Other traditional antagonists such as famine, warfare, and accidental death are threats which may or may not occur. Yet disease always remains ready to attack the individual at any stage of his development. Even the relatively germ-free environment of the womb provides no sanctuary from the virus of rubella or the spirochete of syphilis, which occasionally snuff out young lives before they really begin. In many of our urban slums and rural "poverty pockets," the infant is still exposed to enteritis and diphtheria even though these infections are virtually 100 per cent preventable with adequate medical supervision. No child is immune from nature's cruel genetic tricks, such as PKU or cystic fibrosis, which may handicap him from birth. All persons must run the gauntlet of rheumatic fever, diabetes, and leukemia during both childhood and adulthood, and if these hazards are successfully avoided, they become candidates for the various forms of arteriosclerotic disease and cancer that pose a constant threat during the later years of life.

This rather grim description of disease is not presented to provoke a sense of alarm or hopelessness, for neither of these emotions are appropriate in light of the progress that has been made in combating diseases of all categories. Within this century, mortality rates for most of the communicable

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Needed Action

One of the more disturbing aspects of man's struggle against disease is the great difficulty we seem to have in applying newly developed technology to practical situations. Medical technology has developed to the point that one out of every two cancer patients can be cured, yet we apply this technology to only one out of three. Many factors that are significantly related to heart disease have been identified. We know that persons who control their weight, avoid heavy cigarette smoking, and exercise appropriately can minimize their risk of heart disease, but we are not very clever at encouraging people to take these measures. Nature is a tough adversary; we will probably never develop solutions for all our disease problems. This is understandable, but our failure to apply the knowledge we have is becoming increasingly inexcusable. Therein lies the health educator's greatest challenge.

Old Remedies. A good deal of the problem appears to result from the average citizen's tendency to apply historical solutions to modern problems. At the turn of the century, the greatest threats to the American's health were other living things in the form of microbes. Although progress in the fight against these outside invaders has been little short of phenomenal, the average citizen's role has been passive. For the most part, he hired others to do his disease fighting for him. He paid a few additional tax dollars for the filtration and chlorination of his water supply, and thereby eliminated typhoid as a major threat. He paid a few more cents for pasteurized milk or tuberculin-tested cows and greatly reduced the spread of tuberculosis. He sat by and waited for the scientific community to develop effective vaccines for tetanus, diphtheria, and whooping cough or, at the most, lent financial support to this work. He supported the medical profession with his dollars and confidence and it responded with well-trained professionals armed with sulfa drugs, penicillin, and improved obstetrical techniques.

Meanwhile the very same economic progress and improved technology that provided the basis for the fight against communicable disease was also having an effect on the living habits of the average citizen. He was able to buy good foods that were often rich in fats and cholesterol. He was freed from much of the burden of hard physical labor. The automobile, with its trail of carbon monoxide, solved many of his transportation problems. His safer but less convenient cigar, pipe, or "chaw" gave way to the pack-a-day cigarette habit. When it became apparent that cardiovascular disease and cancer had become the major threats to his health, he responded again with dollars for research and improved technology, that is, with the same basic behavior that he had exhibited during the successful struggle against communicable disease.

The American citizen has demonstrated his willingness to pour millions of dollars into the fight against chronic disease in several ways: his federal tax dollars support the research work of the National Institutes of Health;

diseases have been reduced to a fraction of their former size, with a consequent twenty-year increase in the average American's life span. Improved medical technology has held the rate for apoplexy (stroke) steady in spite of the growing proportion of elderly persons in our national population, and this very increase in the average age of our citizens has hidden the substantial progress that has been made in the treatment of cancer and heart disease. In 1937 the treatment of cancer saved one out of every five patients; however, by 1968 this ratio had been improved to one in three.¹ Meanwhile the development of intensive-care units for cardiac patients has vastly increased the heart-attack victim's chances of survival, and improvements in rehabilitative techniques are gradually improving the prospects for years of normal life after the attack.

A Fair Appraisal

Health progress has been very aptly described as "a periodic redefining of the unacceptable,"² and this description appears to be exceedingly accurate as it applies to man's efforts to combat disease. Tuberculosis was a leading killer at the turn of the century, but its heavy toll has since been reduced to 6,500 or so annual deaths. This represents tremendous medical progress, yet these 6,500 deaths are totally unacceptable at a time when virtually all deaths from tuberculosis can be prevented by early detection and treatment. Deaths from uterine cancer have been reduced by half over the past thirty years, yet practically all the 14,000 deaths that do occur are needless. As health professionals become more efficient at reducing deaths from certain types of disease, the few remaining victims become relatively more tragic by comparison. Everyone has to die from something, but not from whooping cough at eleven months, not from tetanus at twelve years, uterine cancer at forty, heart disease at forty-five, or lung cancer at fifty.

Thus far we have discussed disease only within the narrow framework of mortality. Many of the generalizations that have been made also apply to the problems of disease-caused disability. Tremendous strides have been made in the battle against rheumatic heart disease, yet the relatively few young people who are still disabled represent a tragic and needless waste of human resources. Hundreds of young women are sterilized by untreated gonorrhea, and thousands of essentially young men find that life is not quite the same after a coronary attack even if recovery is almost complete. An unnecessary disability that occurs early in life is often more tragic than a normal and expected disease that terminates a long and full life.

¹1968 *Cancer Facts and Figures* (New York: American Cancer Society, 1967), p. 11

²George James, "Emerging Trends in Public Health and Possible Reactions," *Public Health Reports*, Vol. 80, No. 7, July, 1965, p. 583

tuberculosis; others are less apparent, such as using properly designed drinking fountains that keep the fount head clear of the exhaust water. Beyond providing direct and immediate disease-controlling procedures, the school's greatest potential is found in the health education phase of the school program. But before considering this aspect of the health program in detail, a brief review of school health services and the protection of the school environment should prove useful.

Environmental Considerations

Many features of the modern school plant that seem directed toward the improvement of general comfort or the aesthetic qualities of the school also serve to minimize the spread of communicable disease. An efficient heating and ventilation system serves to break up heavy concentrations of airborne germs; the proper control of temperature and humidity helps maintain the protective qualities of the mucous membrane of the nose and throat; modern sweeping and cleaning procedures reduce the exposure to spore forms of microorganisms found in dust particles; generous policies concerning sick leave reduce the chances of contact with teachers with communicable diseases; requirements that teachers show proof each year of their freedom from tuberculosis and that cafeteria workers be free of dangerous infections provide further protection of the school environment; the provision of adequate classroom space helps prevent pupil-to-pupil transfer of infection. Although dramatic benefits do not result from any single one of these procedures, their combined effect makes the school a generally safer environment in terms of communicable disease than the average home and neighborhood. Public health departments attest to this fact by encouraging the schools to remain open during occasional epidemics of influenza and streptococcal infections.

School Health Services

Unlike the environmental controls, which are for the most part focused on the communicable disease problem, school health services deal with chronic disease as well as communicable disease. Cumulative health records provide a means of keeping track of children with heart defects, diabetes, severe asthma, or epilepsy as they move from grade to grade or otherwise come into contact with new teachers. This enables teachers to be systematically informed about children requiring special attention because of their health status. Alert and responsible teachers, school nurses, or other school personnel can provide the parent with needed stimulus and support in securing thorough treatment and care for children with chronic defects.

In the area of communicable disease control, the school often cooperates with public health personnel to provide tuberculin screening and in some cases free immunizations. Also, accurately kept health records often allow school personnel to alert parents whose children lack the needed protection

his charitable donations go to the American Heart Association; his Social Security payments support the Medicare program; and an increasing proportion of his paycheck is devoted to medical and hospital bills or to various insurance programs which cover these expenses.

Bitter Prescriptions. Simply stated, this impressive financial outlay facilitates greatly improved care to the individual once he develops any of the common chronic diseases. However, it does not provide what he really seems to want, namely, a ready cure or convenient means of prevention. Our hypothetical citizen wants the scientists to present him with a pill, a vaccine, or something to add to his water supply that will alleviate each serious health problem. But instead of these convenient solutions, he is provided with admonitions to give up pleasurable habits, to seek out hard physical exercise, and to go to the doctor for expensive and sometimes unpleasant examinations when he is not sick. He would much rather have a pill or a simple injection, but these do not seem to be in the offing as a solution to our modern disease problems.

These comments, of course, somewhat overstate the case. All of our modern disease problems are not caused by chronic disease; venereal disease is certainly a major health problem. One of the old solutions may someday be found in the form of a vaccine for some or all forms of cancer. But for the most part, we are now in a new situation in which the enemy comes not from without, but from within our bodies. In the words of George James, Dean of New York's Mount Sinai School of Medicine, "Man is rapidly becoming the cause of his own major reasons for death and disability through various errors of either omission or commission."¹ Man eats too much saturated fat, smokes too many cigarettes, exercises too little, subjects himself to too much nervous strain. The venereal disease victim will not seek prompt treatment; he will not reveal his sexual contacts and the physician he eventually sees may refuse to report his case.

Even at the tissue level, it is man's cells that run wild to produce malignancy, man's antibodies that apparently produce the disabilities of arthritis and asthma, and man's gene's that produce hemophilia and to a large extent diabetes. Thus the new enemy to health is man himself, who practices self-destruction either through overt action or through the inner functioning of his physiological processes, and he is proving to be a tougher animal to control than the microbe.

THE ROLE OF THE SCHOOL

The well-designed and effectively administered school that is becoming increasingly prevalent in modern-day America combats disease in several important ways. Some of these are obvious, such as mass screening for active

¹George James, as quoted in *Human Potential in a Dynamic Environment* (Proceedings of the Arkie House Conference), School Health Education Study, Washington, D. C., 1968, p. 1

cation curricula are planned. It also seems particularly appropriate to the study of disease and environment in the elementary school. Most developmental psychologists feel that children of elementary school age (seven to twelve years) possess a tremendous curiosity about their environment. For many children this interest is probably greater now than at any other stage. The preschool child typically is preoccupied with his social status within the family and the adolescent is commonly overwhelmed with his problems of heterosexual adjustment. Meanwhile, the fourth-grader is busily catching tadpoles, collecting rocks or leaves, and bringing home toads and snakes; and these activities are only slightly less popular among girls than among boys at these ages.

These young botanists and zoologists do not have any immediate plans for going into horticulture, nor are they attempting to cure any of their health problems with toad skins or snake oil; they simply want to learn more about these interesting items. This natural interest can be used to lead children into a study of many important topics that may not appear too practical at the moment but that will pay big dividends at later grade levels. To understand disease, one must first understand the normal structure and functioning of the body; many health textbook series properly place heavy emphasis on anatomy and physiology in their fourth- or fifth-grade texts. Adults in our society may have occasion to deal with complex antigen-antibody reactions such as immunizations and allergy reactions and with autoimmune conditions such as arthritis, tissue compatability, Rh factors, and so on. The elementary-level child should not be expected to master the concept of the antibody response, but he can learn a great deal about cells of all types whether they be found in human tissue or in single microorganisms. This background will facilitate his acquiring knowledge about the production and function of antibodies during his secondary school health classes.

Science and Health

Disease and environment as health topics are closely related to the science curricula of many elementary schools. The study of human anatomy and physiology is an obvious example of a common topic, and there are many other overlapping topics, such as reproduction and heredity, nutrition, microorganisms, and parasitic and symbiotic relationships. Because there seldom seems to be enough time available for health education teaching, it is important to avoid wasteful duplication. A careful review of the year's curriculum for science and health will often reveal opportunities for scheduling topics to supplement each other. A study of nutrition in health, for example, might be ideally scheduled during the weeks immediately following a science unit on how animals digest and use their food; better yet, it might be combined into one well-integrated unit combining the time allotments and teaching materials.

that a good immunization program can provide. Another important service is the identification and isolation of children who are ill when they arrive at school or become ill during the course of the day. Prompt removal from the classroom benefits both the ill child and his classmates whose risk of exposure is thereby reduced. The school usually stands ready to contact family physicians or an ambulance service in those rare instances where this action is justified.

Education and Disease Control

The benefits that result from an effective educational program dealing with disease are less tangible than those related to environment or services; however, they are probably far more important in terms of long-term results. A young girl who learns the fundamentals of weight control and develops an appreciation for a slender figure may reduce her chances of heart disease forty years later. The boy who grasps the basic concepts concerning the role of microorganisms in the cause and transmission of disease during the fifth or sixth grade may be ready to acquire needed information concerning venereal disease during his junior high and senior high school years. The remaining portion of this chapter will be devoted to the task of getting this educational program started in the elementary school.

OVERVIEW FOR THE ELEMENTARY LEVEL

A review of the characteristics of children of a particular age group insofar as interests, needs, and developmental factors are concerned commonly reveals two categories of educational needs. The first category includes those concepts and attitudes that are useful to the child in carrying out the day-to-day activities typical of his age group. As applied to the study of disease, this would include for the elementary level child such items as a knowledge of the importance of personal hygiene, proper rest, and the acceptance of immunizations as necessary procedures. The second category includes those learnings that are necessary prerequisites to the development of more complex concepts in later grade levels. The study of venereal disease in the eighth grade might properly deal with such concepts as periods of communicability, carrier states, and subclinical states. Yet why should the eighth-grade health teacher have to start from scratch on these concepts? The basic idea that someone who does not appear sick may still be infected and fully capable of transmitting a disease is not so difficult that a fifth- or sixth-grader cannot understand it at his own level and develop a foundation for a more sophisticated degree of understanding in his junior high years.

Prerequisite Learning

Although the immediate needs of children traditionally have first priority in any discussion of content selection, the idea of prerequisite learnings will be presented here first because it is so often overlooked when health edu-

INSTRUCTIONAL APPROACH

Suggested Concepts

One of the more promising trends in health curricula is the increasing support of a unified concept of disease in which disease is viewed basically as a state of disequilibrium within the body. Most of us harbor a few pneumococci in our lung tissue whose number are kept in reasonable limits by our resistive forces. This balanced state may continue for years until our resistance is weakened by extreme fatigue or the debilitating effect of a stroke, whereupon the symptoms of pneumonia emerge. Within much of our body tissue, a nice balance exists between the shedding of worn-out cells and the growth of replacements. If the growth of new cells becomes excessive and disorderly, the state of disequilibrium we call cancer results. This unified concept appears to provide a means to integrate much information concerning disease, but this synthesis seems best left for the secondary level. Therefore, many of the following priority concepts deal with communicable and chronic disease as separate categories. These concepts were formulated after a review of several sources.⁴ This list, like any similar one, should be carefully reviewed in the light of local needs before any part of it is incorporated into lesson plans or curriculum guides.

1. *Disease occurs when the normal functions of the body are hampered by any of a great variety of agents or conditions* Many disease conditions result from microorganisms, whereas others are caused by hereditary defects or such environmental stress as nutritional excesses or cigarette smoking; regardless of cause, all diseases interfere in some way with the normal functions of the body.

2. *Disease causes various types of disability ranging from mild and temporary to severe and permanent.* The significant aspect of a disease is the threat it poses to one's life or functional capacity. This factor varies greatly both between and within various disease categories.

3. *Communicable disease is caused by the excessive growth of various types of microorganisms within the body* The human body commonly harbors numerous types of microorganisms; many of these are either helpful or harmless to bodily functions but others cause damage when their number becomes excessive.

4. *The severity of a particular occurrence of communicable disease depends basically on the effectiveness of one's resistance to the agents involved.* Often the resistive forces of the body destroy harmful microorganisms or hold their number to manageable limits, thus preventing any disease symptoms; in other cases, the harmful effects are so minimal that the disease condition is

⁴Most influential were *Health Concepts: Guides for Health Instruction* (Washington, D C: National Education Association, 1967); Edward B. Johns, Wilfred C. Sutton, and Lloyd E. Webster, *Health for Effective Living* (New York, McGraw-Hill, 1966); and *School Health Study, Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press, 1967).

Pupil Needs and Disease Content

The problems and needs of children at particular school levels have traditionally provided clues to the selection of content. These factors are valuable; however, the relationship between a problem area and an educational area is not always clear, particularly in the case of disease. Leukemia is one of the priority health problems for this age group, as attested by the millions of dollars we spend for research on this disease. However, there is little point in stressing leukemia in the elementary school, because the child's role in combating this disease is minimal. Habits of weight control and physical exercise serve as lifelong factors working against heart disease and strokes; however, there are perhaps better ways to promote these habits than as means of preventing cardiovascular difficulties in middle age. These considerations require that various types of content be handled differently in the curriculum for optimum results.

Health Practices and Routines. Elementary school children can learn a good deal about disease prevention by being encouraged to practice simple hygienic routines at school. These include covering one's face when sneezing or coughing, washing one's hands before meals and after trips to the toilet, avoiding the use of other children's drinking straws and candy bars, and reporting illness promptly to one's teacher. These practices would belong in any well-managed classroom even if health education were not part of the curriculum; however, when basic information about communicable diseases is given at the time that these practices are taught or reviewed, then a mutual reinforcement can result. The disease concepts help support the practices and the practices add a realistic touch to the concepts. It should be emphasized that any long-term educational benefits require planned instruction. It is a gross misnomer to train elementary children in a few hygiene routines and call that health education. This is comparable to helping children to keep track of their milk money, then labeling it arithmetic.

Disease Concepts Per Se. The information about disease that elementary-level children acquire from a good health education serves a dual function: it helps support immediate good health practices and also helps provide a good foundation for future learning. The various concepts related to immunization have already been discussed in terms of their value as prerequisite learnings, but these concepts may also help the child develop a good attitude toward acquiring immunization shots. Understanding the role of proper rest and nutrition in maintaining disease resistance has obvious implications for school-age children, who often undervalue these factors. However, at later grade levels these same factors also may serve as the basis for a more sophisticated study of energy level and disease etiology. The effects of smoking on the respiratory and cardiovascular systems is another prime example in this category. As will be seen in the following section, most of the concepts in this area have value in their application to both present behavior and future learning.

INSTRUCTIONAL APPROACH

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not recognized. However, when resistance is ineffective, serious illness and death may result.

5. *Communicable diseases are transmitted from one person or organism to another by a typical series of events which may be analyzed and predicted.* Some diseases are transmitted directly from one person to another, whereas others require a vehicle such as water or an intermediate host such as the mosquito; knowledge of the specific mode of transmission for a given disease enables selection of the most efficient means of controlling it.

6. *Chronic diseases are persistent conditions involving bodily malfunctions which are occasionally caused by microorganisms but more typically result from various hereditary or degenerative factors or from specific personal and community practices which are detrimental to health.* A few diseases such as tuberculosis are both infectious and chronic; however, most chronic diseases result from a variety of factors other than microorganisms.

7. *Many diseases affect certain age groups more frequently than others.* Certain infections which threaten life during infancy present little danger to the mature person; children of school age are particularly prone to communicable diseases, whereas certain forms of chronic disease are universal among the elderly.

8. *Detrimental living habits which contribute to the development of chronic disease often begin early in the life of the individual.* Many behavior patterns such as cigarette smoking, overeating, and avoidance of exercise are established prior to and during early adolescence; these habits often contribute to disease conditions which become manifest during middle age or the declining years.

9. *The occurrence of most diseases can be delayed, minimized, or prevented completely by intelligent health practices.* Some diseases can be prevented entirely by immunizations and others can often be avoided by maintaining one's general resistance on a high level; many forms of chronic disease can be delayed by proper living habits and minimized by early diagnosis and prompt treatment.

10. *Effective treatment methods exist for most forms of disease which can reduce the severity and permanence of disease-related disabilities.* Many diseases can be completely cured by proper treatment; others can be minimized or controlled for long periods of time. Even those conditions that are inevitably progressive can be moderated by supportive therapy.

Suggested Techniques

At the elementary level, most of the content included in teaching units on disease is based on the biological rather than the behavioral sciences. As applied to communicable diseases, instructional time is most properly spent developing the basic concepts of disease agents, modes of transmission, and basic methods of prevention. These constitute the real educational task. Although objectives related to attitudes and practices are also important,

these are commonly presented as part of a training process outside the context of normal classroom routines. These attitudes and practices are most likely to endure when they are supported with a good understanding of the fundamentals of disease transmission, so once again the priority educational tasks appear to lie in the biological realm.

Probably the two most useful techniques for this content area are classroom experiments and demonstrations. These activities can provide the vitality and enrichment necessary to good learning at this level. College and secondary school students can often benefit from discussing and theorizing about basic issues in disease, but the elementary school child needs to see bacteria colonies growing in a culture plate and tars condense from the smoke of a cigarette. These are traditional methods, but when handled with a modern twist they can suddenly become quite creative. An open-ended approach provides the key to this transformation. When this principle is applied, experiments lose their cookbook quality and become methods of discovery. In a similar fashion, the demonstration no longer is used to prove something we already know, but to provide a challenge to youthful powers of interpretation and application.

Although most of class time could be profitably devoted to laboratory-oriented activities, this is often impossible because of limitations in equipment, materials, and more importantly, teaching time for preparation and organizational tasks involved. Fortunately, many good films are available which can add realism to the study of disease without making excessive demands on teaching time. Films represent a necessary and acceptable compromise when laboratory activities are not practical; however, they can also bring information to the children that would not otherwise be available. Pathological organisms cannot be put into the elementary classroom for observation, nor can disease transmission involving insects or animals as intermediate hosts generally be illustrated in concrete form, but films, pictures, and diagrams can convey this information effectively.

One important exception to the biological orientation in the study of disease at the elementary level should be noted. Study of the common factors that motivate young children toward the use of cigarettes is useful. Social and emotional pressures often lead the child into a lifelong habit that greatly increases his risk of disease. It is important that the child learn about the physiological hazards related to this habit; however, this alone is not enough. If he is to preserve his freedom of choice, he must gain some understanding of the specific ways that peer pressure, the normal desire for adult status, and other such factors move people into the cigarette habit in a somewhat insidious way. The proper handling of this type of content requires the use of such student-centered techniques as buzz sessions, problem stories, and sociodramas. For this reason, many curriculum guides call for the grouping of smoking with alcohol and drug abuse in a unit on stimulants and depressants. Although such a grouping is admittedly logical, smoking will be dis-

cussed here within the context of disease because of the predominantly biological nature of its detrimental effects. It does not cause the behavioral problems and personality damage commonly associated with alcohol and drug abuse.

PRACTICAL APPLICATIONS: ELEMENTARY LEVEL

In this section, examples of workable techniques and general approaches to the teaching of content related to four specific concepts will be presented. Both the primary and upper elementary levels will be included in these illustrations.

1. Full Disclosure—The Best Policy

In terms of morbidity, or prevalence at any one point in time, dental disease ranks first among school-age children as well as among most other age groups. Although much is still unknown about the process of tooth decay, the basic cause appears to be similar to that of so many other disease conditions, namely, the action of harmful microorganisms. *Lactobacilli* and other acid-forming bacteria take up residence in the mouth, ingest carbohydrates, and excrete acid that dissolves the enamel of the teeth to produce dental caries. At least two characteristics of this process give it an insidious quality that tends to work against well-motivated dental care. First is the time factor; it normally takes weeks of neglect to produce significant damage and months or years before painful conditions develop. Second, this process is largely invisible. The infectious bacteria cannot be seen, so the individual remains unaware of their activities until serious damage has occurred. In this example, disclosure tablets are used to reveal immediately the presence of acid on the surface of the teeth.

- Concept:* The occurrence of most diseases can be delayed, minimized, or prevented completely by intelligent health practices.
- Pupils:* Developed for second-graders of average academic ability and socioeconomic status; also recommended for grades three and four.
- Technique:* Experiment involving the use of dental disclosure tablets.

From the standpoint of decay prevention, it would be ideal if children would brush their teeth thoroughly following every meal or snack. Although this is generally not practical, an acceptable alternative is available in the form of a rinsing of the mouth after lunch and each in-between-meal snack involving sugary or starchy foods. Anything that can encourage children to substitute fresh fruits or vegetables for candy and cookies is also very helpful. Apples or carrots, for

instance, do not produce sticky deposits on the teeth but actually provide some mechanical cleaning action because of their rough texture. There are several ways to demonstrate these facts to elementary school pupils. Here is one possibility for use with a class that is already familiar with disclosure tablets.³

1. Soon after class starts in the morning, select four students who have previously demonstrated good teeth-brushing ability and ask them to brush their teeth thoroughly using any standard dentifrice. Use this opportunity to review proper brushing techniques for the total class.

2. After the teeth have been thoroughly brushed, ask each demonstrator to rinse his or her mouth to remove as much of the dentifrice as possible. Direct each subject to eat something sweet and sticky such as a cookie.

3. Immediately after the cookies have been eaten, tell the first child to brush his teeth using the same dentifrice, the second to rinse his mouth thoroughly with water, the third to eat an apple, and the fourth to do nothing. The class should then resume its normal schedule of activities for the next two to three hours.

4. Shortly before lunch, ask each of the four children to chew a disclosure tablet for a few moments; after they have swallowed or spit out the residue, ask the class to observe their teeth. Discuss the differences that are observed.

In most cases, the child who did nothing after eating the cookie will be found to have large reddish areas on his teeth indicating the presence of acid resulting from bacterial activity. The teeth of the child who brushed thoroughly should be quite white by comparison and the teeth of the remaining two children will normally show an intermediate condition. Be prepared to discuss unexpected results, as some children develop acid plaques more quickly than others for various reasons. The amount of saliva produced or the general acidity or alkalinity of the mouth can produce these differences. If the tablets have been used during previous class activities, it may be possible to select children with approximately equal placquing tendencies for the experiment. If the class has not had previous experience with this material, the four subjects should each chew a tablet before their initial brushing as the first step in the experiment. This will provide a chance to familiarize the class with the purpose of the tablets and allow the teacher to gain some idea of the placquing tendencies of the subjects for a better interpretation of the results.

³These procedures are based on a similar example presented in Leslie W. Irwin et. al., *Health in Elementary Schools* (Saint Louis, Mo.: Mosby, 1966), pp. 269-270.

II. *The Too, Too Common Cold*

Any reasonable efforts that can be made to avoid the common cold are exceedingly worthwhile. Although this affliction is not as dramatic in its effects as many others, it rivals more widely feared conditions in its ability to reduce the over-all satisfaction we receive from life. Each year it disables us for a few days and denies us the activities, accomplishments, and feeling of well-being associated with good health. Occasionally, when it allies itself with pneumonia and influenza, a much more serious threat to our health results; in this role the common cold becomes more than a nuisance.

In one sense, however, the cold serves as a valuable ally to the health educator for it acts as a concrete, believable condition to avoid. It might be unreasonable to encourage young people to make substantial modifications of their living habits to avoid such diseases as pneumonia, mononucleosis, or spinal meningitis. These conditions occur with relative infrequency (and usually to someone else) but everyone knows the unpleasantness of a cold. But while we are combating this very real, if minor threat, with good nutrition, adequate sleep and rest, and avoidance of undue exposure, we are also minimizing our chances of contracting more serious conditions. Also, these measures yield benefits extending far beyond the increasing of one's resistance to infections. As teachers, we can teach children that proper foods and adequate rest will lessen the severity and frequency of their colds and do so with a clear conscience; by stretching the facts ever so little, we can add fresh air and exercise to these preventive measures and be well on the way to a program for total health. In the following example, children plan and construct posters to illustrate these desirable practices:

- Concept:* Communicable diseases are transmitted from one person or organism to another by a typical series of events which may be analyzed and predicted.
- Pupils:* Developed for third-graders of average to below-average academic and socioeconomic status; also recommended for grades four and five.
- Technique:* Art project involving poster painting.

The use of various types of art projects as learning activities is generally a surefire means of eliciting the interest and enthusiasm of elementary school pupils. Because pupils are going to enjoy the assignment regardless of the specific details, the teacher's challenge lies in leading the children toward relevant and meaningful outcomes. There is a time and place in the curriculum to practice art for art's sake, but in this instance the focus is on health knowledge and attitudes. Here are some specific recommendations that apply to the typical situation:

1. Begin this activity toward the end of a unit on disease prevention or, if initiated early, delay the actual poster construction until the end of the unit. If the children are to work with the proper degree of independence and still be effective, they must first gain some idea of the important concepts to be illustrated in their posters.

2. In order to achieve diversity and comprehensiveness in the posters, organize the class into small working groups of four to eight pupils and select a theme or topic for each group. This places the children working on similar posters in close proximity to one another, thus enabling them to share ideas and avoid duplications. Because this project bears on disease transmission, one logical basis of organization would be the various steps of this process:

- a. *Reservoir of infection.* Cold germs live in the bodies of persons who already have colds; these people should stay home. If they do not, stay away from them if you can.
- b. *Escape and transmission.* The germs must escape from the reservoir and travel to someone else if the cold is to spread. They do this by riding in little droplets of fluid that are given off when the sick person coughs, sneezes, or exhales. The little droplets ride on air currents. Handkerchiefs, tissues, sufficient space and ventilation, and so on, are needed.
- c. *Overcoming the resistance of the host.* The germs must overcome the resistance of the new person if the disease is to be effectively transmitted. Resistance can be strengthened by proper nutrition and rest.

In small classes, one group may be assigned for each area. Normally these areas should be broken down further, such as by having one group work on nutrition and another on rest in the resistance area.

3. The simplest materials to use in this project are construction paper and colored crayons. However, poster board and poster paint produce more satisfying results. Provide the children with some basic tips on poster composition. Brown and others suggest that posters should be

- Aimed at one main purpose
- Forceful and clear in treatment (don't leave the viewer in doubt about the message)
- Colorful (vivid, bold colors draw attention and focus it on the topic)
- Large enough to be easily seen
- Concerned with the topic that is currently being studied by the class*

*James W. Brown, Richard B. Lewis, and Fred Harderood. *AV Instruction Media and Methods* (New York: McGraw-Hill, 1969), pp. 175-76

If possible, illustrate these points by using pupil-constructed or commercial posters as examples.

4. Arrange for the proper display of the posters once they are completed. In some rooms there will be enough bulletin-board space for this purpose. If appropriate, some of the better ones may be displayed about the school on hallway bulletin boards and in similar locations. Another useful procedure is the so-called clothesline art show, in which a cord or length of heavy twine is strung along one side of the room and the posters attached with clothes pins.

5. After the posters have been displayed for a week or two, they should be removed and the better ones saved to serve as examples for future classes. Some teachers may prefer to save all the posters in a loose-leaf book for future use.

III. Friends and Enemies

Man shares his environment with many organisms that are normally invisible to him because of their small size. Within this category, bacteria are among his most important neighbors. Although the advent of modern drugs and immunizations have removed many bacterial infections as significant problems, a few, such as strep throats, staph infections, meningitis, and gonorrhea still cause trouble. Meanwhile many of our recently subdued enemies, such as typhoid, pertussis, and tetanus, stand ready to make a comeback once we let our guard down. But while these pathogenic types of bacteria get our attention, other forms quietly perform useful functions. Several varieties participate in the constant task of transforming organic wastes into useful nitrates as part of the vital nitrogen cycle; others contribute to the production of cheese and other dairy products; and still others establish themselves in man's large intestines, breaking down cellulose and synthesizing vitamins for his use.

To the elementary-level child seeing is believing, and a learning activity that enables children to observe bacteria can greatly improve their understanding of these important organisms. Learning activities involving the microscope can meet this need; however, these instruments are often not available to the elementary school teacher. A very acceptable alternative is the culturing of bacteria in colonies large enough to be seen without artificial aid. Here are some specific ways to accomplish this.

Concept: Communicable disease is caused by the excessive growth of various types of microorganisms within the body.

Pupils: Developed for fifth-graders with average academic and socioeconomic status; also recommended for grades 4 and 6.

Technique: Experiment involving bacterial cultures.

In a broad sense, the culturing of bacteria goes on in every classroom every day and in many other places as well; so there is really nothing too mysterious about manipulating a few of the factors in this process in order to observe it more directly. These manipulations can range from the extremely simple to the extremely complex according to the resources available and the requirements of particular situations. Here are some workable procedures:

1. Begin any culturing experiments early in the unit involving the study of bacteria. It usually takes about three days to grow observable cultures, although sometimes much more time is required because of the specific conditions. However, provide a general introduction or overview before initiating the experiment so that the children have a basic understanding of what they are trying to learn. This can be accomplished with a good film or reading assignment followed by a class discussion. While waiting for results, a more detailed study of bacteria and other microorganisms can proceed.

2. One of the simplest and most practical methods of culturing bacteria is described by Irwin, Cornacchia, and Staton.

To show the growth of germs, boil some small, peeled potatoes until firm and place one in each of four sterile pint jars with lids. Maintain one jar as a control but contaminate the potatoes in the other three jars by (a) rubbing with dirty hands, (b) rubbing with hands after washing with soap and water, and (c) rubbing with tissue after blowing nose. Put lids on all jars, label, and place in a warm but visible location. Observe daily the growth of bacteria and compare with the control potato.⁷

Except for the intentional contamination as described, be careful to avoid further exposure of the potatoes, particularly excessive handling or exposure to the air. Also, be sure the "warm but visible location" is protected from direct sunlight.

3. Those teachers who are blessed with a reasonably generous budget and a little foresight can substitute more elaborate materials by purchasing Petri dishes already prepared with nutrient agar from appropriate supply houses. Or if they wish to conduct more extensive experiment at minimal cost, they can prepare their own Petri dishes according to directions provided by Wailes, using a household pressure cooker:

Wash the Petri dishes with detergent and allow them to dry. Then place the covers in position and sterilize the covered dishes in the oven by heating

⁷Leslie W. Irwin et al., *op. cit.*, p. 273

at a temperature of 400° F. for about one hour. Remove the dishes and set them aside to cool keeping the covers in place.

Buy prepared dehydrated nutrient agar from a supply house. Mix with water according to the directions on the label. Heat, stirring constantly, until the mixture comes to a boil. Pour into a Pyrex flask that will fit into your pressure cooker and plug the mouth of the flask loosely with absorbent cotton. Place the flask in the pressure cooker and add water to the pressure cooker to provide steam for at least 30 minutes. Close the pressure cooker and cook at 15 pounds of pressure for 15 to 20 minutes. Allow the pressure cooker to cool; then open and remove the flask. Allow the flask to cool slightly but not enough for the agar to gel.

Carefully lift one side of the cover of each sterile Petri dish and pour enough of the nutrient agar into it to form a layer about $\frac{1}{4}$ inch thick over the bottom. Quickly close the cover and allow the dishes to cool and the agar to gel.⁴

Wailes recommends an experiment involving a control dish which is kept covered at all times and four experimental conditions which involve (1) exposing a dish to the air for half an hour, (2) touching a dish with the fingers of thoroughly washed hands, (3) touching a dish with unwashed finger tips, and (4) having a child comb his hair over a dish. The five covered dishes (including the control) are then placed in a warm, dark place for three days, after which the results may be recorded and discussed.

6. Although the risk of children becoming infected during these experiments is slight, it can occur if precautions are not taken. Therefore, once the lids are replaced on the jars or Petri dishes, *do not let the children come into contact with the culture mediums* by touching or sniffing or in any other way. Keep the lids in place throughout the experiment, and when it is completed dispose of the contents in an incinerator. If Petri dishes were used and their reuse is planned, then:

First flood the surface of each dish with Lysol, or a 5 per cent solution of cresol. Let the solution stand for about half an hour and pour off. Empty the dishes into a newspaper, and burn it in an incinerator. Do not touch the cultures. Wash dishes in a strong detergent as a further safeguard.⁵

7. Many different facts and understandings can result from experiments involving the culturing of bacteria. Some of these are illustrated directly by the results, whereas others can arise from discussions and readings. Some specific things that may be learned are

⁴James R. Wailes, *Living Things* (Oarien, Conn.: Teachers Publishing Corporation, 1968), p. 23

⁵Ibid.

- a. The need for a "control" in any experiment and the specific purpose it serves.
- b. The constant presence of bacteria in almost all places.
- c. The general characteristics of bacteria as microscopic, non-green plants found in a variety of sizes and shapes.
- d. The ways to kill bacteria (heat, pressure, direct sunlight, disinfectants, and so on).
- e. The conditions required for optimum growth, including darkness, moisture, and warmth (as inside one's body, among other places).
- f. The fact that the majority of bacteria are either harmless or beneficial to man.
- g. The fact that some bacteria cause disease.
- h. The ways to prevent undue exposure to bacteria.

IV. A One-Way Street

As adults we often complain that children are shortsighted, that they conduct themselves with little thought of future consequences. The behavior patterns that many children adopt which eventually produce detrimental health effects provide one of the more aggravating examples of this general characteristic of youth. In spite of our admonitions they seem determined to embark on a regular pattern of late hours, ear-shattering music, french fries, and cigarette smoking. But are they really so oblivious to the future? We also find the typical child agitating for the privileges of his older siblings, mimicking the actions of some glamorous adult entertainer or sports figure, and dreaming about his future career and accomplishments in very specific ways. Young people do seem capable of reacting to future consequences when they are confronted with them in a concrete or realistic manner. The present example deals with cigarette smoking. With no time machines yet available, an interview project was selected to provide sixth-graders with some perspective on this questionable habit by bringing them into meaningful dialogues with other age groups.

Concept: Detrimental living habits which contribute to the development of chronic disease often begins early in the life of the individual.

Pupils: Developed for sixth-grade coed classes with average academic and socioeconomic status; also recommended, with modifications, for grades 7 through 12.

Technique: Interview project

The interview project described here takes on many of the aspects of a survey, in that information is obtained from many persons; however, unlike the survey, no attempt is made to select the subjects or inter-

viewees in a systematic manner. The following are some specific recommendations for a typical situation:

1. Begin the project early in the unit on cigarette smoking, so that the project report will be presented to the class before the end of study on this topic. The line of discussion leading to the assignment might go something like this.

- a. Many children begin smoking when they are quite young.
- b. The longer one smokes, the more difficult it is to quit.
- c. Therefore it is a good idea to take a good look at this habit before deciding if it is for you.
- d. One way to do this is to ask those who have already faced this issue what they think of cigarette smoking.

This, of course, is only an example, there are many other good approaches. Regardless of the variation used, try to avoid a negative or condemning attitude toward this topic. Even sixth-graders know, in a general way, that cigarettes are a health hazard, so a "hard-sell" approach is not needed.

2. Help the class plan the project in terms of (a) who they are going to interview and (b) specifically what they are going to ask. Because sixth-graders will not have regular access to persons outside their own home, it would be well to ask the total class to participate in the gathering of the information by interviewing one of their parents and any older brothers or sisters that may be in their households. The interviews should be guided by a set of prepared questions selected by the class. Typical questions might be the following:

- a. Do you believe that cigarettes are harmful to health?
- b. Do you think that someone can smoke now and then without picking up the habit?
- c. Do you think that cigarettes can help people relax?
- d. Do you think that cigarettes can help young people socially?
- e. Does smoking cause you any particular problems (if you smoke)?
- f. What do you think about elementary pupils that smoke?

3. Once the list of questions is decided upon, ask each member of the class to copy it down. Ask the pupils to conduct the interviews in private if possible and to record the responses for each person on a separate piece of paper. Each response sheet should also include the interviewee's sex, age, and his smoking status, if he chooses to reveal it. Emphasize the necessity for legible handwriting in recording the answers.

4. Ask the class to set a definite deadline for the completion of all the interviews and remind the children daily of this obligation until

the appointed time arrives. When all or almost all of the response sheets are in, divide them into three groups for interviewees of junior high school age, of senior high school age, and of adult age. If enough persons of college or young-adult age were interviewed, a separate category should be formed for them; otherwise, they may be grouped with the parents in the adult category. Form three (or four) committees, each consisting of two or three of the more capable members of the class. Ask each committee to review the response sheets for its category and prepare a brief report of its findings. The time required for this task will necessarily vary according to how many response sheets were returned; thirty minutes should be sufficient in most cases.

5. When the committees have finished their work, call the class together to hear the reports and discuss the findings. When possible summarize the answers for each age group on each question. This information may be conveniently displayed on the blackboard in a simple grid, with vertical lines to designate age categories and horizontal ones to form rows for all, or the more important, questions. (See below.)

	<i>Junior High</i>	<i>Senior High</i>	<i>Adult</i>
1. Are they harmful to health?	Only if you smoke too many	Yes, but not for several years	Yes, they are very harmful.
2. Are they always habit forming?	Not for everyone, only heavy smokers.	Sooner or later you get the habit.	Yes, and it's very hard to stop.
3. Do they help you socially?	Yes, with some groups you have to smoke	Depends on what people you're interested in	No, they're often a handicap

6. The best strategy for handling the final discussion will vary according to the nature of the results. The most obvious information to extract is the identification of relationships between age and opinion. Such trends as "the older the smoker, the more the health concern" or "the older the smoker, the stronger the habit" will be commonly found. Be alert for prominent minority opinion differences between boys and girls, or between groups one suspects to be smokers and nonsmokers. Once again, avoid obviously biased interpretations against cigarette smoking. Under anything resembling normal circumstances, the honest facts will make their own point far more effectively than any "teacher manipulation" of the results. At the very least,

the results will show differences between adult opinion and student opinion, but with just a little good fortune, these sixth-grade investigators will uncover a trend toward smoking disenchantment starting in junior high and growing stronger with increasing age.

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Disease and Environment: Secondary Level

Like his counterpart at the elementary level, the secondary school student needs education on disease prevention and treatment, but although important, such education is for the most part not urgent. (One notable exception to this rule is found in the venereal disease problem.) Adolescents are generally very healthy. As health educators, we can claim little credit for this situation, which is usually the result of nutritious food, parentally imposed medical care, and the natural vitality of youth. Nor can we guarantee the adolescent much immediate improvement in the few disease problems that he has, even if he were to offer his wholehearted cooperation. Therefore, the content we present in this area will have to be oriented toward the future if we are to meet the adolescent's real needs. However, let us first look at some of the direct steps the modern school can take to control disease.

School Services and Environment

The health services that the secondary school provides to combat disease differ little from those provided at the elementary school level. Students who become ill during the school day are normally sent home to receive proper care and to prevent further exposure to their classmates. Special

arrangements and precautions are generally provided when needed for those students with chronic conditions, such as diabetes, epilepsy, and heart defects. Occasionally the school cooperates with public health authorities to provide the students with the opportunity to receive needed immunizations or tuberculin tests. The school's efforts to provide a healthful environment are commonly reflected in such things as providing effective ventilation and plumbing systems, screening school personnel for infectious conditions, and establishing sick-leave policies that make it convenient for sick teachers to stay home. Although these procedures in the areas of services and environment seldom produce dramatic results, they make direct, concrete contributions to the health of secondary school students.

Educational Needs

The adolescent years provide the teacher of any important subject with a prime opportunity. These are the years in which the individual forms concepts and attitudes which can serve him well throughout his lifetime. It is this long-range view that provides the real key to selecting content related to problems of disease for presentation at the junior high and senior high levels.

Living Habits. Very often relatively permanent behavior patterns regarding diet, exercise, cigarette smoking, and to a lesser extent, medical care are either formed or consolidated during one's years as a teen-ager. Although these patterns often have important effects on the over-all quality of one's life and on longevity, they are often adopted rather passively on the basis of trivial considerations. An effective program of health education can help young people examine facts and alternatives regarding important habits while it is still relatively easy to change them. This examining process is valuable in itself, regardless of the apparent quality of the choices that result. A high school girl may examine the health hazards incurred as a result of cigarette smoking but may still feel that the social advantages outweigh the health liabilities. However, if she has learned to examine new courses of action before adopting them, she may make a more favorable decision on a later occasion when she finds herself tempted to rely on barbiturates and amphetamines during her college years.

Venereal Disease. The problem of venereal disease is somewhat distinct from other disease problems of the adolescent because of the serious consequences of untreated cases and the inherent problems in its control. Although a review of objective evidence concerning increases in teen-age sexual activity does not support the exaggerated estimates of many alarmists, the trend does seem to be relentlessly upward.

One consideration which adds a sense of urgency to the problem of venereal disease among teen-agers is the insidious course of these diseases. The remission of symptoms in the third stage of syphilis may lead one to believe that he or she is free from the infection at the time of greatest danger.

The characteristic mildness of the symptoms of gonorrhea in the female may cause treatment to be delayed until the fallopian tubes have been irreversibly damaged. At the very least, a missed case of syphilis may cause a positive Wasserman test in a premarital blood test, a rather inconvenient situation.

The more effective units on venereal disease have content which is largely biologically, rather than morally, oriented. This approach places first priority on the encouragement of those exposed to seek treatment. This is a much more realistic goal than attempting to minimize exposure by reducing sexual activity through use of fear-provoking or moralizing techniques. There are many things wrong with the use of fear as the core of a program; however, they can be summed up most simply by stating that it is ineffective. It is much better to stress the importance of treatment in a relatively unemotional but realistic way while at the same time providing accurate information as to the symptoms and the procedures for obtaining treatment.

Community Responsibilities. Many young people assume adult responsibilities immediately after or before their high school graduation, the rest are only a few short years away from this status. One important adult responsibility in American society is that of supporting needed legislation and programs designed to ameliorate health problems that require a community approach. These group efforts are not needed merely to serve some vaguely defined "common good" but, rather, to provide clean air for individual citizens to breathe, to provide fluoridated water (and consequently reduce family dental bills), and to regain unpolluted streams and lakes (and thereby protect citizens from an outbreak of hepatitis). To an increasing degree community action in the form of laws, tax-supported programs, and research activities by voluntary health agencies is needed to solve problems related to disease and environment. School health education could do much more than it now does to prepare citizens for this task. Let us consider what tools the citizen needs to meet his responsibilities to his community, his family, and himself.

Content Emphasis

In the simplest analysis, two general types of information are needed to make decisions concerning personal or community actions related to disease control: (1) the basic scientific information and (2) information on the personal and social realities concerning the implementation of measures designed to combat the problems.

Physical and Biological Aspects. Health decisions are often influenced unduly by social, emotional, or economic factors. An understanding of the biological aspects can help keep the effects of these powerful factors within proper bounds. Everyone is in favor of clean air, at least in principle, but when vigorous enforcement of air pollution laws threatens to drive large industrial concerns and their tax revenue out of a community, then the

average citizen often has second thoughts about the matter. Thus, public health officials present facts and people read that sulphur dioxide is harmful to the cilia of the lungs and that carbon monoxide forms a stable compound with hemoglobin and reduces the oxygen-carrying capacity of the blood, but such facts often have little impact, because most people have little concept of the importance of cilia, hemoglobin, or transportation of oxygen in the blood. However, a 5 per cent property-tax increase or a \$150 increase in new car prices because of the addition of air-pollution-control devices constitute firm realities. Similar situations can be found relative to energy balance and weight control, active versus passive immunity for tetanus, and the role of cleanliness in the control of acne. Somehow health educators must get the facts and concepts across if students are to be equipped to make intelligent, independent decisions.

Implementing Decisions. One of the more frustrating aspects of work in the health field is the common gap between the useful things that should be done to correct health problems and the useful things that are actually put into practice. At the personal level this lag appears to result from procrastination and value conflicts; at the community level it seems to result from the time-consuming task of overcoming public inertia and overriding vested interests to institute action needed for the over-all benefit of the community. It is these problems in community matters that have particular importance to disease problems, especially those involving improvement of the environment. There is little the individual can do on his own to keep radioactive strontium out of his milk or to put fluoride into his drinking water. However, if the individual citizens understand something of the practical aspects of generating support for public measures, then they are capable of taking appropriate supportive or leadership roles in community efforts to achieve these goals. Students need to understand the potential power of a well-organized delegation to one's county or township meeting, or the force a letter from a large church group can exert on one's congressional representative.

Community issues can be studied quite profitably in the classroom, provided the essential facts are examined and that a free-inquiry approach is encouraged. If a student's attention is directed toward the hard realities of cost as well as toward the potential benefits, then he will have an opportunity to prepare himself for future decisions as a tax-paying citizen. Too often practical aspects are ignored as the teacher presents a strong case in favor of every measure designed to promote health. These one-sided presentations undoubtedly contribute to the commonly observed situation wherein our youthful citizens systematically support every measure for community improvement while they are dependent upon their parents for financial support, then systematically oppose most of these measures as soon as they assume tax burdens. Certainly some sort of balance is needed between these extremes. If students have an opportunity to examine negative

factors in the classroom, they will not be shocked later on, when confronted by the real situation. Although such experiences are often provided in social studies classes, a little overlap on this general point would probably be very worthwhile.

INSTRUCTIONAL APPROACH

Thus far we have discussed the general type of content that secondary school students need if they are to become equipped to make intelligent decisions concerning problems of disease. Unfortunately what students need is not always what they want. Most of the things teenagers should learn about disease are needed so that they can preserve the good health they already possess. Because they achieved good health with little personal effort, it is exceedingly difficult for them to believe that any special measures are needed to maintain it. However, all other factors make for an ideal learning situation. Secondary school students have the mental maturity to grasp relatively complex concepts; they have, or should have, more time available for the study of health than will be available later on, when they are in college or have a job; from a developmental standpoint, they are still flexible enough to develop and modify their living habits. The missing ingredient is interest, and educators are supposed to be able to provide this.

Interest Patterns

If one is permitted to overgeneralize concerning the changing pattern of interests exhibited by the typical secondary school youth as he matures, it can be described quite simply. He begins as a seventh-grader with a high degree of interest in physical objects he can observe directly. During his junior high school years he becomes increasingly interested in abstract qualities that apply to him personally, such as courage, popularity, intelligence, and so on. During his senior high years a good deal of youthful idealism emerges in the form of concern for selected social issues. Although there are many individual exceptions to this scheme and although important sex differences have been somewhat ignored, content and learning activities selected in accordance with it will generally meet the least amount of resistance for any given group of secondary school students.

The Junior High Level. When this general pattern is translated into specific plans for teaching concepts on disease and environment, it becomes very logical to emphasize biological content in the seventh and eighth grades. Examples of topics in this area include disease agents, immunization, and the basic characteristics of cancer and heart disease. These topics will capture the interest of junior high students if good learning activities are used, such as experiences involving microprojective techniques, simple experiments with bacterial cultures, and attractive films for use when it is not practical to use other materials. Some health educators will say that eighth-graders cannot become interested in cancer or heart disease because

these conditions do not pose an immediate threat to them; however, any good biology teacher knows that such children can become interested in normal cells and normal hearts and that abnormal conditions are even more fascinating. The good biology teacher approaches the child with specimens, test tubes, and microscopes; too often the health teacher makes his approach with words about future consequences. Very often the methods of science education are not appropriate for teaching health, but when they are, they should be adopted with little hesitancy.

As junior high students move further into adolescence and become more aware of the implications of their approaching adult role, particularly the sexual aspects of this role, they become increasingly self-conscious. Matters of personal appearance, body image, and over-all personality characteristics become increasingly important to them. This enables them to become interested in many topics of long-range value because they are immediately useful. For example, exercise becomes important because it offers the possibility of controlling weight and toning up the body. Weight control itself has obvious implications for personal appearance and considerable knowledge is needed to achieve lasting success in a weight reduction program. It becomes sensible to consider the prospects of stained teeth and a steady drain on one's finances before students become too fully committed to the cigarette habit. It becomes foolish to miss a big dance or basketball game because of a heavy cold that could have been avoided. If the health educator uses these motivational "hooks" tactfully, without presenting these considerations too forcefully, then he can provide young people with the opportunity to develop living habits with far more important benefits than the seemingly trivial aspects that were originally used to attract the interest of the students.

The Senior High Level. As the adolescent moves along into the last year or two of senior high school, he becomes increasingly attracted to social and political issues. He may not be too enthusiastic over the specific legal or governmental aspects, but he is quite capable of becoming heavily involved with the basic issue itself. The commonly offered American Problems course for twelfth-graders often finds students delving into such topics as civil rights, capital punishment, the draft, and voting rights for eighteen-year-olds. In a similar way, the health teacher can stir up excitement concerning air and water pollution, community programs for venereal-disease control, and the proper role of the government in the control of the cigarette industry. Many of these topics combine scientific complexities, economic considerations, and value judgments into fascinating packages.

Suggested Concepts

Although the adolescent needs certain essential facts concerning disease for his immediate needs, he also needs to acquire important generalizations which can help him in the future. The following concepts are based on a re-

view of several sources.¹ This list is not comprehensive in itself, for it assumes both thorough teaching of the concepts provided for the elementary level on pp. 337-338 and further development of these elementary concepts at the secondary level. The concepts presented here were selected on the basis of their special appropriateness for the secondary school program. Because they reflect the personal biases of the authors, they should be carefully reviewed prior to any use in local programs.

1. *Disease represents a marked disequilibrium in bodily processes resulting from some form of direct stress or reaction to stress.* The stress may be the result of microbes, a blood clot, a disorderly growth of cells, or an inappropriate reaction of the body's own defense system, as in allergy conditions.

2. *Although a single agent or condition may represent the most important cause of a particular disease, its occurrence commonly represents the net effect of several interacting forces.* Communicable diseases are generally dependent on the development of large numbers of a specific microorganism within the body; however, this process is enhanced by nutritional deficiencies and fatigue; a coronary thrombosis is a well-defined event, but the contributing causes may include hypertension, cigarette smoking, and dietary factors.

3. *The natural defenses of the body represent the most important single category of factors that prevent or minimize disease.* Specific defenses, such as those resulting from antibodies, or outside aids, such as drug therapy, are highly useful; however, the natural defenses of the body provide a measure of protection against virtually all potential disease conditions.

4. *Certain health practices can be highly effective in preventing or minimizing the detrimental effects of specific diseases and disease categories.* The securing of certain immunizations provides virtually absolute protection from many diseases; periodic medical examinations can minimize the threat of cancer; and reasonable modifications in a variety of living habits can delay the onset of atherosclerosis.

5. *Research has provided, and continues to provide, findings that are highly effective in the prevention and treatment of various diseases.* The process of systematic, scientific inquiry has been a key factor in the great progress that has been made against communicable disease and is currently serving a similar function in the fight against chronic disease.

6. *Because individual disease conditions vary greatly in their potential for producing death and disability, mankind commonly establishes priorities in efforts to develop techniques of prevention and treatment.* The basic destructiveness of various diseases, together with such factors as the proportion of the population susceptible, the age group typically attacked, the specific

¹Most helpful were *Health Concepts: Guides for Health Instruction* (Washington, D.C.: National Education Association, 1967), Edward B. Johns, Willard C. Sutton, and Lloyd E. Webster, *Health for Effective Living* (New York: McGraw-Hill, 1966), and School Health Education Study, *Health Education: A Conceptual Approach to Curriculum Design* (St. Paul, Minn.: 3M Education Press, 1967).

nature of the symptoms, and other such factors, affect the importance commonly attached to various diseases.

7. *Various social, emotional, and economic factors commonly exert important influences on the degree to which modern technology is utilized in combating disease.* The appropriate application of modern knowledge concerning disease often involves changes in behavior or monetary expenses that the individual is unwilling to tolerate; this problem is often further complicated by an unawareness of the implications involved.

8. *Effective disease-prevention and control measures often require organized community efforts for development and implementation.* Modern research requires personnel and facilities, environmental control requires regional agreements and legal enforcement, the training of health professionals requires complex programs; these and other important aspects of disease control necessitate an organized community approach.

Suggested Techniques

A comprehensive coverage of the topic of disease at the secondary level will normally involve a wide variety of teaching methods. Although almost any acceptable technique will prove useful somewhere in the program, maximum results will depend upon the proper matching of technique to topic and grade level. Generally speaking, biologically oriented topics should be presented by laboratory-type techniques involving actual materials or such facsimiles of materials as realistic films. Teacher demonstrations are also very appropriate for this type of material. These techniques are somewhat teacher centered, in that the teacher generally selects the materials to be examined and provides a general structuring of the activity. The creative potential of these methods can be realized if the principle of open-endedness is kept in mind. This requires that the students be challenged to discover the important implications of learning experiences; the teacher must encourage a follow-up of the scheduled activities with further probing when there is sufficient interest.

Those subtopics dealing with problems related to personal or community behavior that commonly involve value judgments should generally be presented through the use of student-centered techniques. A student-conducted survey to determine the extent of cigarette smoking within the student body, a student panel on the underreporting of venereal-disease cases by family physicians, and a debate on the relative advantages of government-sponsored versus privately sponsored cancer research are examples of possible ways to get students involved in topics that require value judgments. The teacher's role in these activities is to help students find pertinent facts and then to provide opportunities for the open discussion of the issues involved.

In most situations the student-centered techniques will prove most useful at the senior high level and the laboratory- and materials-centered

activities that involve stronger teacher guidance will work out best with junior high students. This is only a matter of emphasis, not an inflexible rule.

PRACTICAL APPLICATIONS: SECONDARY LEVEL

This section on practical applications at the secondary level includes examples of instructional procedures designed for the development of four specific concepts. These examples are evenly divided between the junior and senior high levels.

1. Teaching the "Now" Generation to Prevent Heart Disease

It is usually not difficult to get junior high school students interested in the study of heart disease. As is the case with wars, plagues, and earthquakes, people of all ages can develop at least a morbid interest in something that kills thousands of persons. This somewhat questionable source of motivation can be used to lead teen-agers toward a reasonably good understanding of the mechanics and causes of a coronary thrombosis. But a problem arises immediately when someone suggests that they do something about it, that they disrupt their life style, ever so slightly, to delay something that is not going to happen for thirty or forty years. This attitude is unfortunate but understandable; adults too are notoriously poor at taking steps to forestall misfortunes that may occur at some indefinite time in the future. It is probably impossible, and undesirable as well, to convince people that they should take all possible steps to avoid heart disease; however, it is both possible and desirable to guide people toward behavior patterns that yield immediate benefits as well as some protection for the future. This general principle is applied in the present example, wherein eighth-graders embark on "health habit projects" to see if they can find any short-term advantages to habits designed to minimize the risk of future heart disease.

Concept: Certain health practices can be highly effective in preventing or minimizing the detrimental effects of specific diseases and disease categories.

Students: This example was designed for use with an eighth-grade coed class with average socioeconomic and above-average academic status; with suitable modifications, it could be used throughout the junior high grades with advanced students and with all groups at the senior high level.

Technique: The health habit project.

The "health-habit project" is simply a voluntary outside assignment

wherein a student adopts an improved health practice for a specified period of time. On completion of the project the student reports on his subjective reaction to the new practice and also on any objective improvement in his health status that may have occurred. This type of assignment may be used independently by simply soliciting volunteers at an opportune time during the course of a particular teaching unit. However, in the present example, the projects serve as a follow-up activity to a symposium. The following procedures should work well with a typical eighth-grade class.

1. As part of a unit on chronic disease or heart disease, secure student volunteers to conduct a symposium (see pp. 126-128) on the factors related to heart disease. Ask them to emphasize finding and reporting on health procedures that apparently help prevent or delay the onset of heart trouble. Also charge them with the responsibility of identifying from among these practices those that they feel will also improve the individual's health in the near future.

2. If the student reporting group is reasonably competent and has had access to good sources of information, it will probably include all or most of the following recommendations in its report:

- a. Avoid cigarette smoking.
- b. Practice weight control.
- c. Limit the intake of fats to 20 per cent of one's caloric requirements.
- d. Limit saturated fats to 50 per cent of one's total fat intake.
- e. Engage in regular physical exercise.
- f. Avoid excessive emotional stress.
- g. Obtain early treatment for diabetes.
- h. Obtain early treatment for high blood pressure.
- i. Have regular medical examinations appropriate to one's age.
- j. Give special attention to preventive measures if one's family has a history of heart disease.

3. Ask the reporting group to conclude its discussion with recommendations of practices that may provide early rewards. Suggestions may include such items as avoiding cigarettes, reducing body weight, reducing the intake of fats, and exercising properly as practices within this special category. At this point the class should be given an opportunity to discuss these items so as to identify and evaluate the possible short-term benefits. Class members may suggest clean teeth, improved figure or physique, better complexion, and improved recreational skills as worthwhile fringe benefits. If possible, the teacher should lead the class toward a common acceptance of and some enthusiasm for these particular health habits.

4. At the conclusion of the symposium, solicit volunteers for participation in a number of four-week projects of their particular interest. Some students may wish to embark upon a weight-reduction program (with parental or medical supervision), or campaign to reduce fat intake in hopes of securing some improvement in complexion or reduction in body weight. Others may be interested in adding more exercise to their routine.

5. In some teaching situations students can be motivated to volunteer for such projects out of pure interest and the prospects of self-improvement; however, many teachers prefer to provide added incentives in the form of extra credit or the opportunity to meet a standard term-project assignment through this activity.

6. Ask each volunteer to submit a brief one-page outline of his or her program. Review these carefully to ensure their general safety and workability. Once the students have started their programs, provide informal encouragement by occasionally asking them about their progress. Set aside five or ten minutes of class time per week to hear brief oral progress reports from the volunteers and require a complete oral report from each of the participants at the end of the designated project period. If three or more reports are involved, a symposium format may be used in their presentation. This will provide for the more effective discussion of any common experiences or generalizations.

7. The content of the reports will vary widely according to the characteristics of the reporters and the nature of the project. Generally the report will be more valuable if the participants are advised ahead of time to include information pertaining to their degree of success in sticking to their program, the factors that helped or hindered their efforts, any positive benefits they experienced, and whether or not they plan to continue their program.

II. Let's Visit the Water Factory

To the average citizen water is a natural right, something that is always present in the environment and available to every one. For the added convenience of having water immediately at hand in his home, the average citizen is willing to pay a small fee so that the community can set up a simple delivery system. But few things in our modern world are simple. More and more, water is becoming a manufactured product. Few cities are so fortunate as to be able to pump untreated water into their systems. The water being used must usually undergo a complex series of processes which must be carried out with considerable precision if the "water factory" is to deliver a safe and palatable product. In the following example, ninth-grade students gain some realization of the elaborate equipment and trained personnel that

a modern water-treatment plant requires by an on-the-scene visit.

Concept: Effective disease prevention and control measures often require organized efforts for their development and implementation.

Students: This example was designed for use with a ninth-grade coed group of average socioeconomic and academic status; with suitable modifications it could be used throughout grades 7 through 12.

Technique: Small-group field trip.

In the ideal field trip we would probably find the entire class transported to the facility involved and organized into small tour groups, each with a competent guide. This, of course, is seldom practical in the average teaching situation. However, the small-group field trip can provide a very practical and acceptable alternative which retains many of the advantages of the conventional field trip. Because the small-group trip is described in some detail on pages 133-135, the suggestions here will deal primarily with the handling of the specific subject matter involved.

1. Encourage the investigating team of students to become as knowledgeable about water-treatment procedures as possible through the study of library sources. Help the group organize the information-gathering process into logical tasks for assignment to individual members. A team of four might charge individual members with responsibility for gathering data on (a) the basic water supply, including where it is obtained, its initial state when received, and its adequacy in terms of future needs; (b) the treatment process, including purposes of various chemical additives, the type of filtration, and the control of purity and palatability; (c) storage and delivery, including the function of local tanks and reservoirs, the need for mains, laterals, and so on; and (d) items of special interest. This fourth assignment should go to a student with access to a camera who could then make a photographic record of the trip. If the school or the student committee is affluent enough to afford the film, 35-mm slides provide the ideal way to embellish the report. However, good black and white prints are inexpensive and can be viewed by the class through use of an opaque projector.

2. Impress the individual investigators with the importance of developing a reasonable degree of expertise regarding their phases of the project. Each participant should develop a specific list of questions to ask or points to look for. A partial list of questions that a student might develop for the area of water treatment would include the following:

- a. Do any specific disease organisms pose a particular threat to this specific source of water?
- b. What particular tests are most useful in determining the purity of the water supply?
- c. Upon what principles are these tests based?
- d. How often are they performed?
- e. What measures are taken to ensure the destruction of pathogenic organisms?

An alert student that begins his tour with this sort of checklist might return with some interesting information on, for example, infectious hepatitis, membrane filter techniques for determining the presence of coliforms, and the need for free chlorine residuals. Although these terms may seem difficult for ninth-graders, the important ideas associated with them are basically simple. Students who grapple with these technicalities will develop a fuller appreciation of the many factors involved in protecting a community water supply.

3. During the actual tour the student responsible for reporting on a particular area of the operation should be alert to the need for photographs with which to illustrate this report. He should point out particularly good picture possibilities to the photographer of the group.

4. As soon as possible after the visit the student committee should present its report in the format described for the symposium (pp. 126-128). The general discussion following the individual reports should provide the teacher with the opportunity to guide the attention of the class toward some important subconcepts, such as the following:

- a. The demand for water is increasing much faster than the population.
- b. Water must be reused if modern needs are to be met.
- c. Polluted water can be treated to make it potable, but the process is expensive.
- d. Water with an unpleasant taste and odor is not always dangerous; water with a pleasant taste and odor is not always safe.
- e. A safe and abundant supply of water is essential to the economic growth of a community.

6. Although this project as described can be used as the sole means of direct contact with the community during the study of environmental health, an extremely rewarding (and demanding) alternative consists of organizing the total class into investigating teams, with each assigned to a separate aspect of the total topic. This would result in concurrent visits to such facilities as sewage treatment plants, air-pollution monitoring stations, slaughterhouses, and canneries;

visits might also be made to those agencies dealing with noise abatement and rat control. The relevance and practicality of visits to specific facilities vary from community to community, but the guidelines for providing leadership and encouragement to the students remain much the same.

III. Gang Up and Help Your Buddy Fight V.D.

Venereal disease would probably not exist in the United States as a significant public health problem were it not for the shameful and guilty connotations that the general public persistently attaches to it. Community efforts to encourage sexual morality and eradicate venereal disease are both exceedingly worthy causes; however, experience has shown they do not work well together. If one chooses to view a given instance of sexual intercourse as immoral, then the fact that venereal disease is or is not transmitted in the process should not thereby increase or decrease the degree of sexual immorality involved. However, by uniting a moral problem with a disease problem, society has created a number of serious obstacles to the effective control of venereal disease. The treatment of common forms of venereal disease with suitable antibiotics is virtually 100 per cent effective, is free or inexpensive, and is less embarrassing than most persons realize. In this example the tenth-graders of a large urban high school hear these facts from a public health officer.

Concept: Various social, emotional, and economic factors commonly exert important influences on the degree to which modern technology is utilized in combating disease.

Students: This example was designed for use in an urban setting with a tenth-grade coed class ranking below average in socioeconomic and academic status; with suitable modifications it could be used throughout grades 9 through 12 in most all types of school situations.

Technique: Resource speaker.

The problems associated with obtaining good resource speakers are often so difficult that many health teachers eventually ask, "Why bother?" Although this point of view is perhaps justified with respect to some topical areas, it is generally unwarranted when dealing with venereal disease in metropolitan settings. Teachers in these situations will often find their local health departments ready to send knowledgeable persons into the schools to discuss all aspects of venereal disease. Public health workers with responsibilities in this field realize the importance of reaching the public, and they properly identify teen-agers as members of a priority group for their education-

al endeavors. Many teachers provide a worthwhile experience for their classes by simply phoning the disease-control section of the health department and requesting a speaker; however, much greater value can be gained from such a visit if a few additional measures are taken. The following are some specific recommendations.

1. If at all practical, arrange for the speaker to appear before groups no larger than regular sections of twenty to thirty students. Those students who may have occasion to seek treatment at a local public health facility need an opportunity to develop confidence in the person associated with the program. This will occur much more readily in a small-group setting than in an assembly-hall type of presentation.

2. Schedule the resource speaker's visit late enough in the unit of study covering venereal disease that the students have a reasonable degree of knowledge on the topic. The speaker's time should not be spent in covering the same basic material that is found in most health texts. The nature of venereal-disease transmission, the symptoms, the possible consequences of untreated cases, and other such material should have been covered at the junior high level and reviewed again in depth before the arrival of the speaker.

3. Venereal-disease education at the senior high level should provide students with the opportunities to realize the importance of (a) seeking legitimate medical treatment if they have any reason to suspect that they have been exposed to venereal disease, (b) co-operating with physicians or case workers in finding others who may be infected, and (c) supporting community efforts in the form of laws and services that are needed to combat venereal disease. Ideally, this type of content would be covered in a general way prior to the speaker's visit, thus allowing his presentation to focus on the specific aspects of the local programs.

4. As soon as the date and time of the visit have been established, provide the prospective speaker with a clear indication of the content that has been covered in class. Offer suggestions as to what aspects he should cover in his report. Be sure to inform him of any films or the topic of venereal disease that the students have recently viewed. This serves to inform him further on the background of the students and prevents any duplication in the event he plans to use films in his presentation.

5. During the class meeting immediately preceding the visit, distribute 3- by 5-inch cards and ask each student to write one question that he would like the visitor to answer. After all such cards have been collected, review them carefully and select about eight of the more relevant questions that are most representative of the total group of cards. Present these to the speaker promptly on his arrival for possible

incorporation into his presentation if he so desires. Also encourage him to allow time for additional student questions within his presentation for each group. A group that has been well prepared for a resource person may ask such questions as the following:

- a. If someone thinks they have venereal disease is it best to go to their family doctor or to a public health clinic?
- b. If someone goes to a public health clinic for venereal-disease treatment, will his parents be told?
- c. Why should someone with venereal disease tell investigators the names of all their friends if they only had sex with one person?
- d. What will happen to me if one of my friends gives my name to a venereal-disease case worker?
- e. What do you do to those suspects that refuse to be examined or that refuse treatment?

6. In the class meeting following the resource speaker's presentation, allow at least part of the class period for follow-up discussion. This process can be facilitated by some careful note taking during the presentation of points that merit re-emphasis or that did not seem to get through to the class at the time. This procedure is particularly valuable if more than one section is involved. Often the content covered by the speaker necessarily varies from class to class because of the nature of student questions, shortened periods, and other such factors.

7. Utilize every intellectually honest opportunity to emphasize (a) the importance of treatment for all those exposed, (b) the availability of treatment, and (c) the practical necessity of cooperation with venereal-disease case workers.

IV. Your Favorite Charity

A rather ancient joke that makes its appearance now and then in any one of several variations goes something like this: A somewhat charitable judge extends to a condemned criminal the privilege of selecting his own means of death; the criminal immediately chooses "old age" as his selected form. Few persons spend much of their time contemplating their preferred form of death. They probably feel that there are much more pleasant ways to occupy one's time and that, at any rate, they have little choice in the matter. But if certain aspects of human behavior are observed closely, it is apparent that people establish definite priorities in regard to their fear, respect, and concern for various death-dealing and disabling diseases. In many instances these priorities seem to represent reasonable choices based upon important values; in other cases these largely implicit choices seem ill advised. People can devote only a limited amount of their time,

money, and other resources toward the prevention of disease and the pursuit of health before the process becomes self-defeating; therefore, it becomes worthwhile to examine priorities. In the following example, twelfth-graders seek to accomplish this by investigating the degree of financial support that their community extends to various voluntary health organizations. This provides a very realistic measure of the public's concern over various health problems.

Concept: Because individual disease conditions vary greatly in their potential for producing death and disability, mankind commonly establishes priorities in efforts to develop techniques of prevention and treatment.

Students: The present example was designed for twelfth-grade coed students of average socioeconomic and academic status; with only slight modification it could be used with most any senior high school classroom group.

Technique: Interview project.

The number of voluntary health agencies and their degree of activity vary a good deal from community to community. The manner in which funds are obtained also varies, with some agencies relying heavily on United Fund drives and others concentrating on individual collection campaigns. The practice of selling memberships and operating along the lines of a regular professional organization is another alternative. Students will need guidance in their efforts to analyze these factors both as they affect the selection of agencies to investigate and the interpretation of any information that they eventually obtain. Many of the general procedures for the symposium (pp. 126-128) apply to this teaching example; the following specific recommendations are also appropriate for most situations:

1. Although large numbers of students could be used in this project, particularly in metropolitan areas with many active agencies, four to six students are sufficient to carry out the basic assignment. Because these students will be, to a certain extent, representing the school to the community, it is well to select the committee members from among the more mature and responsible student volunteers.

2. The student investigators' first task is to compile a list of voluntary health agencies that are active in their locality. In many larger communities health councils or health and welfare councils maintain offices that can make this information available. In smaller communities the local public health department can advise students on the presence of the local offices of the major voluntary health agencies. The use of either of these sources as starting points will usually make unnecessary a tedious search of the phonebook in an effort to run down the dozens of possibilities.

3. The students should next select five to ten agencies for inclusion in their study. The older and better-established agencies that have had a chance to get their local fund-raising activities well organized generally provide a better basis for comparison. In view of the concept being studied, it is best to restrict the choice to those agencies that are more clearly identified with a single disease or a closely related group of diseases.

4. After the selections have been made, the students should organize themselves into interview teams of perhaps two students each and phone for appointments with the personnel of the agencies to be visited. Prior to the visit the student interviewers should become acquainted with the nature and importance of the disease condition the agency seeks to combat. Also the questions to be asked should be planned carefully in advance. Some of the main points to cover for each agency would be the following:

- a. The amount of money collected locally during the past year and the scope of the geographical area in which the collections took place.
- b. The basic methods used to collect funds—for example, neighborhood campaigns, mailed requests, appeals at work, and so on.
- c. Particular factors that made local fund raising easy or difficult as compared with the drives of competing agencies in the area.
- d. Total figures for state and national fund raising or the address of state or national offices that could provide this information.

5. Once the interviews have been completed, the student committee should meet and pool all the information gathered as it prepares a symposium-style report. The committee's basic task is to develop some carefully formed hypotheses or inferences in regard to public concern for the various disease conditions included in its study. In addition to the basic amount of money raised by the various agencies, committee members must consider the nature of the fund-raising campaign so as to make some judgment on the degree to which this figure reflects genuine public concern as opposed to efficient methods of solicitation. The following are some questions that the report might profitably consider.

- a. Does the potential for causing death seem to be the main factor in the determination of public concern for a particular disease or are other factors, such as its disabling qualities, equally or more important?

- b. How important does the prevalence of a disease seem to be in comparison with its severity as a factor affecting public concern?
- c. Does the public show more concern for diseases that primarily attack children rather than older persons?
- d. Does the public seem to be more sympathetic toward diseases that are purely organic in their causes and symptomology as opposed to conditions with psychiatric or psychosomatic connotations?
- e. Does the locality in which the survey was conducted show the same pattern of financial support as that found on the state or national levels? If not, why not?

It will be impossible for answers to these questions to be determined in an absolute sense; therefore, the teacher should point out the need for considerable caution in drawing conclusions. However, in their efforts to bring information to bear on these issues, students will gain a much better idea of the degree of public willingness to support various disease conditions and find out a good deal about the activities and importance of the agencies themselves.

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- Schwartz, William F. *Teacher's Handbook on Venereal Disease Education*. Washington, D.C.: American Association for Health, Physical Education and Recreation, 1965.
- Smolensky, Jack, and Franklin B. Harr *Principles of Community Health* Philadelphia: W. B. Saunders Company, 1967.
- Smoking and Health: Report of the Public Health Service* Washington. U.S. Department of Health, Education, and Welfare, 1964.
- Wilson, Charles C. (ed.). *School Health Services*. Washington, D.C.: National Education Association and the American Medical Association, 1964.

PART IV

Creative Evaluation and Professional Growth

Pursue, keep up with, circle round and round your life, as a dog does his master's chaise. Do what you love. Know your own bone; gnaw at it, bury it, unearth it, and gnaw it still.

Thoreau

18

Teacher-Student Evaluation and Personal Growth

When teachers teach, they want some assurance that their students are learning. This is the purpose of evaluation. Evaluation, when used correctly, is a way of determining how successful the teacher is, how the information has affected the students, and, in general, how relevant the information is to the class.

In this chapter we shall examine the usual methods of teacher evaluation and offer some suggestions for evaluating creative products and thinking. A final section will deal with professional growth, which is necessary if the teacher is to be as effective as possible.

Subjective Evaluation

Evaluation can be either "informal" or "formal"; effective teachers generally use a combination of both methods. More "informal" ways that do not necessarily include objective measurements are teacher observations, questionnaires, interviews, teacher and student diaries, and other student autobiographical records.

Teacher Observations. The technique of teacher observation has been described in detail in Chapter 2. An effective teacher must be sensitive to an individual's personal idiosyncrasies and learn to distinguish the student's

"intended" impressions from his more typical personality that manifests itself in sometimes subtle mannerisms. Sensitivity training can do much to enhance this characteristic in an instructor. Otherwise, increased efforts on the teacher's part to recognize the students as growing individuals with needs can fulfill this necessary requirement.

Questionnaires. A questionnaire is a means of taking inventory of an aspect of personality. Unlike achievement and aptitude tests, which are considered cognitive, it is a noncognitive tool. Therefore, it must not be utilized as a measurement of a student's ability in health. It can be used to determine whether the instructor has covered relevant material in which the students were interested, how the students reacted to various ideas or techniques, how the students feel about themselves, and so on.

Because lower elementary children do not have sufficient background experiences in many areas of health, and because they do not communicate well at a nonverbal level, the use of questionnaires is limited at this age. In higher grades it would be used sparingly, to prevent overexposure. If given too frequently, the questionnaire's responses become less and less honest.

Interviews. Many teachers often feel a need for discussing particular students with another person who is knowledgeable about that student. Of foremost importance is the student himself. Ironically enough, teachers often do not go to the student himself for information which can often be obtained merely by asking him. Discovering areas of student concern and interest and discovering student feelings about class involvement, health knowledge, and other topics can facilitate a subjective evaluation.

Teachers can also add their opinions and estimates of a student's abilities and interests. These must be weighed carefully, but can add to the fund of information about an individual. A teacher can discover patterns in the way a student's health attitudes have grown and changed, and whether his habits and health practices have been influenced by the health classes.

Interviews with parents are more common at the elementary and junior high levels than at the high school level and above. Parents have more influence over a child and know more about his specific life patterns when he is younger. As a child matures, he is often to be found more out of the home than in, and few parents honestly know in what specific activities their high school child is involved most of the day.

Parents of younger children can provide clues about health practices at home and can be helpful in enabling the teacher discover whether practices stressed in school are carried out in the home. This not only helps in student evaluation but also aids the conscientious teacher in determining his effectiveness.

Diaries and Other Autobiographical Records Students at upper levels (junior high through college) are quite capable of recording their feelings

about themselves in diaries or assignments on such topics as "I want (do not want) to smoke marijuana because . . ." "I feel (do not feel) good about being me because . . ." and "Marriage frightens (does not frighten) me because" A diary can be used by students to record impressions of the material presented to them in class each day or week. If they were stimulated, provoked, bored, confused, they can indicate this and briefly state why.

A perceptive instructor can use such records to estimate an individual's development in various areas of health. Sometimes the instructor will discover the misconceptions and/or lack of background a class has in specific areas. When this occurs, he might find himself changing over-all class objectives in order to compensate for the students' lack of exposure to a particular area or topic.

Measurement

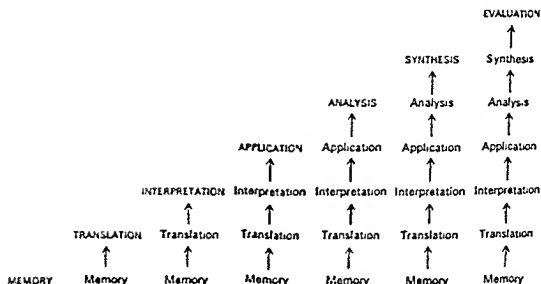
When a student knows he is going to be evaluated, he often automatically thinks of tests. This word-association process is not unreasonable, for tests are currently the most popular way to measure what a student knows about a subject. Fortunately, few teachers rely on tests alone when evaluating a student, but even when tests are used, they can be poorly constructed and lack objective results.

Good test construction requires a careful analysis of the original class objectives. It would be unfair to judge a student on information or skills the instructor did not present in the context of the class. If the objectives have been carefully selected, they should include skills, behaviors, and knowledge as listed in the three domains discussed in Chapter 3. A knowledge of these cognitive, affective, and action domains is a wise investment in any future teacher's time, and this knowledge would be valuable background for the following paragraphs.

Norris Sanders,¹ using the *Taxonomy of Educational Objectives*² as a basis, did an excellent job of classifying questions into the categories designated by Bloom and his colleagues. These categories include memory, translation, interpretation, application, analysis, synthesis, and evaluation. Sanders realized that each category necessitated a different kind of thinking, and it follows that a complete, objective evaluation should give the students an opportunity to organize their thinking into each category of thought. The categories of thought are sequential and cumulative. Each area has unique characteristics, and the higher categories include some element of each of the lower ones. (See the chart.)

¹Norris M. Sanders, *Classroom Questions, What Kinds?* (New York: Harper, 1966)

²Benjamin S. Bloom (ed.), *Taxonomy of Educational Objectives* (New York: Longmans, 1956)



A creative teacher can find many keys to good test construction by a careful consideration of Sanders' book.

A brief example of each category follows.

- *Memory*: What is the hallucinogenic substance found in marijuana?
- *Translation*: Explain the following in your own words: "All personality disorders vary somewhat in symptomatology with variations in cultural conditions."
- *Interpretation*: After studying the charts on the incidence of gonorrhea and syphilis in various age groups, tell at what age you would begin communicable-disease instruction in these areas.
- *Application*: Harry, your best friend in the eighth grade, has begun to smoke. You are going to speak with him and convince him to stop. What will you say?
- *Analysis*: Support or refute this statement: "Teen-age marriages often end in divorce courts." (It will be necessary to define various words in this before continuing.)
- *Synthesis*: Construct your idea of a community free of health hazards.
- *Evaluation*: Argue both for and against marriage in the following circumstances: A couple who are in their first year of college want to get married. The girl is pregnant; the boy is planning on going to law school after he receives his bachelor's degree. Her parents say no; his say yes.

The preceding are only a few of the examples possible in each category. The examples are primarily of the essay or short-answer type, but need not necessarily be. A situation can be constructed, and good true-false, multiple-response, and short-answer questions can be constructed in most of the various categories.

We shall return to the original Bloom *Taxonomy* for examples of some multiple-choice items. The Sanders' book is perhaps not as well known and includes categories not directly specified in the *Taxonomy*.

KNOWLEDGE

Alcohol acts basically as a:

1. Stimulant.
- *2. Depressant.
3. Hallucinogen.
4. Sedative
5. Narcotic.

This item normally tests only knowledge, because students usually read or are told that alcohol is a depressant; if the students were not directly provided with this information, then higher levels of behavior would have been involved.

COMPREHENSION

When taken in large amounts, alcohol tends to make one sleepy, stuporous, and insensitive to pain; in such situations, alcohol is functioning as a:

- *1. Narcotic.
2. Sedative.
3. Tranquilizer.
4. Stimulant.
5. Hallucinogen.

Assuming that the students know of the characteristics of a narcotic and that it is necessary also to understand that large amounts of alcohol can function as a narcotic, this question tests the students' comprehension of the definitions and ideas involved. This goes beyond mere knowledge but does not constitute application. This probably involves translation of a formal and abstract definition by requiring the student to identify a concrete example.³

APPLICATION

A heavily addicted heroin addict would probably be most dangerous to society:

1. Within the first one or two hours after injecting heroin.
- *2. Approximately ten hours after his last injection.
3. Approximately forty-eight hours after his last injection.
4. Approximately ten days after his last injection.
5. None of these; the addict's social behavior would not vary much in these situations.

Students must apply what they know about heroin withdrawal in the heavily addicted and identify the ten-hour interval as the one in which the addict

³Bloom, op cit, p 99.

would be in the very early stages of withdrawal. He would be presumably highly motivated to secure a "fix," but would not be sick enough to be incapacitated, as would be the case in forty-eight hours.

A man dislikes his boss but attends an afternoon cocktail party to avoid offending him; the man has several drinks. Which of the following factors would have an important effect in determining whether or not he will "tell off" his boss:

1. The size and time of his lunch.
2. His body weight.
3. His previous drinking experience.
4. Events on the job during the week.
- *5. All of these are important.

Assuming that this situation was presented to the student for the first time during the test, he would have to apply what he knows about choices 1 through 4 and select item 5 as the most correct answer. This involves the use of abstractions in particular and concrete situations.

ANALYSIS

John M. was smoking marijuana at nine years of age, was taking "goofballs" and "Speed" at fourteen, and was addicted to heroin at seventeen. You can assume:

1. John's little brother, Jocy, will probably follow the same pattern.
2. John's family cares little about his problems.
3. John will probably never become rehabilitated.
4. All of these.
- *5. None of these.

The student must be able to take John's case out of the context of, for example, a ghetto slum area. Applied to a middle- or upper-middle- or upper-class situation none of the first three can be safely assumed. This requires skill in distinguishing facts and the inferences that can or cannot be made from them.

SYNTHESIS

The following remark was made to a young man teaching health education in college: "How can you teach these kids anything about drugs if you haven't ever tried anything except a little bit of alcohol? All of these things work differently; how can *you* have the right to tell them it's bad when many of them have had nothing but good from it?"

In an essay, support or refute this man's proposition, using what facts, authoritative opinions, and inferences from these opinions you have encountered in and outside of this class.

EVALUATION

Examine your prior expectations of this health class. Construct some criteria from your expectations and apply them to the material and methods used to present the body of material in this class. Your conclusion(s) should include how this examination applied to the course content.

Problems in Test Construction

Within any teacher-constructed test are bound to be items that contain errors or that are slanted to give benefit to the student who agrees with the professor or teacher. The following are examples of common types of errors.

Multiple Choice: Weak

In terms of a percentage of total income, the average person can expect to spend on medical costs during his lifetime approximately:

1. 4 per cent.
2. 6 per cent.
3. 8 per cent.
4. 10 per cent.
5. 12 per cent.

This would normally be a poor item because it is too "homogeneous." The fine distinction required has little practical value to the average student.

Multiple Choice: Improved

In terms of a percentage of total income, the average person can expect to spend on medical costs during his lifetime approximately:

1. $\frac{1}{2}$ per cent.
- *2. 6 per cent.
3. 18 per cent.
4. 36 per cent.
5. 54 per cent.

This is better. Knowing that the figure is 6 per cent rather than $\frac{1}{2}$ or 18 per cent provides the student with a general idea of how important this item is in an average budget and might be of practical value in his decision making.

Short Answer: Weak

"The contraceptive pill is designed to ———."

Perhaps the teacher had in mind the chemical way in which the pill would work; the student could merely think, and rightfully so, the pill was made to stop pregnancy. On the other hand, the pill is also prescribed for regulating the menstrual cycle, combating severe acne, and so on. The answer desired is too vague.

Short Answer: Improved

"The contraceptive pill inhibits pregnancy by ———."

This is better because it gives the students a more definite idea of the specific answer desired.

Essay: Weak

"Tell in your own words why there can and should be no obstacles in the implementation of birth-control methods."

Obviously, this statement cannot honestly be answered by people who do not advocate birth control. It cannot be answered by those whose lifestyles and economic subsidization depend upon large families. The teacher cannot assume that, even though future predictions about population and the available food supplies tend to support the necessity for birth control, everyone feels the public good will be served by mere birth-control implementation.

Essay: Improved

"Describe the known methods of birth control and discuss the advantages and disadvantages of each."

This question is much more objective in its approach and can be answered by students in a class which has covered contraceptive methods.

Evaluation for Creative Efforts

The purpose of this book is not to promote creative, original teaching methods in every situation. Creative responses are welcome from students in circumstances where the teacher prepares for them and in classrooms that encourage atmospheres of error tolerance. (See Chapter 6, for a more detailed explanation of this.) But because of the specialized nature of much of our present knowledge, traditional evaluation techniques are necessary to determine whether the norms (what is true in general) and standards (what ought to be true in a particular sense) of the health area have been met.

Merely giving a class exposure to an area or topic in health without attempting to determine how effective the exposure has been defeats the purpose of the teaching. Creative evaluation should not be haphazard. The instructor needs to give careful consideration to the types of questions he asks on an objective-type test. The questions need to be precise, clear, and closely connected to the topics covered in the class.

Subjective evaluation for creative situations must also follow some general criteria. The teacher should ascertain whether the student is sincere in his efforts to expand his sphere of knowledge. There should be some careful thought on the part of the student before preparations for projects, field work, or written synthesis are begun. The student's responses should show that the student is awakening to associations he has not before seen, whether they are original or not. It is accepted that every response cannot be a creative one. What matters is that the response shows that the students have discovered something new to them.

Finally, a teacher can notice whether the behavior of his students reflects that they have truly begun to think for themselves. If this is apparent, the teacher can know that his teaching is meaningful.

PERSONAL AND PROFESSIONAL GROWTH

It seems appropriate to include a discussion on personal and professional growth in the same chapter with evaluation. In many ways they are closely

related. For one, every act, such as evaluation, which requires the teacher to venture into a new area of inquiry helps to advance one's personal and/or professional growth. The art of thorough planning for evaluation certainly requires the teacher to review, interpret, and construct evaluative instruments which will not only help the student to learn, but will also benefit the teacher's own self-evaluation.

This leads to a second link between evaluation and growth. The teacher should never view student evaluation solely as a method of determining grades. It should also be looked upon as a form of self-evaluation, for how well the teacher's students do on a particular evaluative instrument reflects how successful the teacher has been in teaching and/or in construction of that evaluative instrument. The poor teacher rarely uses this information to his advantage; the good teacher spends time in analyzing the results. The following are examples of questions that might be asked: What questions were missed constantly? In what subject areas did the students do poorly? How can instruction be improved in these areas?

Why Teachers Must Continue to Grow

Someone once said that the human mind is like a parachute, in that it is useless until open. This applies to teachers, who must be open to all ideas. This is imperative if one is sincere in his desire to stay in tune with modern education.

Because of the knowledge and technological explosion, one must have competence in the specialized field(s) he plans to teach. The teacher not only must be thoroughly conversant with his subject matter but also must be aware of the teaching devices that are available to help him present his subject in a variety of ways.

It is imperative today that health teachers also have a facility in areas germane to health education. They must have insights into motivation, individual differences, group influences, the effects of the social and physical milieu, ecology, anthropology, and so on. This, it is hoped, will lead to an interdisciplinary approach to teaching and understanding in health education.

Some factors which will facilitate personal and professional growth are

1. Becoming involved in professional organizations and in-service educational programs.
2. Keeping abreast of current information in professional and related books and periodicals.
3. Contributing to the profession through active participation, writing, research, and experimentation.
4. Continuing with one's education through classes, travel, reading, and in-depth discussions.

Becoming Involved in Professional Organizations and In-service Educational

Programs. To keep abreast of new ideas, the health teacher will find that participating in professional organizations through membership and attendance will help to facilitate an exchange of new and innovative ideas. Not only do these organizations provide an exchange of ideas but they also help new teachers in their professional preparation, set standards for the profession, present research, and help in the securing of jobs.

Some of the organizations which the health teacher may wish to investigate for possible membership are the following:

American Association for Health, Physical Education, and Recreation
Department of the National Education Association
1201 16th Street, N.W.
Washington, D.C. 20036

American Association of Sex Educators and Counselors
815-15th Street, N.W.
Washington, D.C. 20005

American Public Health Association
1740 Broadway
New York, N.Y. 10019

American School Health Association
1740 Broadway
New York, N.Y. 10019

American College Health Association
University Health Center
5513 Merrick Drive
Coral Gables, Fla. 33146

The American National Council for Health Education of the Public
800 Second Avenue
New York, N.Y. 10017

National Education Association
1201 16th Street, N.W.
Washington, D.C. 20036

National Recreation Association
8 W. 8th Street
New York, N.Y. 10011

To learn more about what these organizations have to offer, one can consult some of the more recent journals, bulletins, or handbooks that are published periodically.

In addition to the six national organizations listed, most states have local chapters and state teachers' associations that hold conferences, meetings and special-problems meetings from time to time. Membership in these

organizations provides the teacher with numerous pamphlets, books, and periodicals which discuss a wide range of topics.

In-service educational programs allow the teacher to participate in a varied number of activities relating to current teaching techniques, updating of knowledge in specialized areas, and new instructional materials and aids, as well as the construction of objectives, opportunity for insights into problem areas, and so on. The subjects generally covered in in-service programs are endless.

Most in-service programs are offered through local, county, or state educational systems and through teacher educational institutions. They are offered to any teacher who is currently teaching in the designated system. The type of in-service program offered depends on the sponsor, the type of program and subject being discussed, and the resources available to the planners.

One type of in-service program is the *teacher institute*, which is usually planned by a school system to promote professional growth. Another type is the *teacher workshop*, in which small groups are formed to discuss teaching techniques, curriculum improvement, and so on. Many school districts hold workshops a few days before the opening of school or a few days at the end of the year. *Teacher clinics* also offer teachers an opportunity to observe teaching demonstrations of new techniques. *Class visitations* are similar to the clinics in that teachers may observe their colleagues or teachers in another system. This may be done by merely visiting another school in the community or by traveling to another town or state.

The various media of *films*, *television*, and *tapes* are also becoming a popular method of transmitting knowledge and techniques from one group of teachers to another. In areas that have educational television, in-service credit is given to teachers viewing programs designed for professional advancement.

Even in cases where participation is not required for the system's in-service programs, teachers should take every advantage of them. Of course not all of these programs will prove to be worthwhile; every teacher has suffered through at least one. However, just the exposure to other teachers participating in them can often compensate for a poorly constructed program.

Keeping Abreast of Current Information in Professional and Related Books and Periodicals. To keep abreast of current information seems an almost impossible task, but few teachers can disagree with the statement by Wiles that "A strong professional library is a basic element of a good in-service training program."⁴ Nevertheless, some teachers use over and over as their main sources of information a few old books left over from their college

⁴Kimball Wiles, *Supervision for Better Schools: The Role of the Official Leader in Program Development*, 2nd ed (Englewood Cliffs, N J: Prentice-Hall, 1955), pp 262-63

days. Such teachers say, "There is not enough time for reading," or, "When I need a book, I can get it from the school library," or, "Reading is too expensive a habit."

A personal library of books, periodicals, and nonprofessional magazines is a valuable and worthwhile part of a teacher's repertoire of information. When a book is owned, it is always available and is able to be used without the inconvenience of having to go to a library. The professional library should contain not only the standard books and periodicals within one's own field, but also a healthy assortment of works from related disciplines, such as education, sociology, psychology, curriculum planning, and history.

Following is a list of a number of professional books and periodicals within the profession as well as a few from related areas. This list should not be considered complete, but it offers a good start.

General

- Anderson, C. L. *Health Principles and Practice*, 6th ed. St. Louis, Mo.: The C. V. Mosby Company, 1970.
- Fodor, John T., and Gus T. Dalis. *Health Instruction: Theory and Application*. Philadelphia: Lea and Febiger, 1966.
- Grout, Ruth E. *Health Teaching in Schools*, 5th ed. Philadelphia: W. B. Saunders Company, 1968.
- Haag, Jessie Helen. *School Health Program*, rev. ed. New York: Holt, Rinehart & Winston, Inc., 1965.
- Oberteuffer, Delbert, and Mary K. Beyrer. *School Health Education*, 4th ed. New York: Harper & Row, Publishers, 1966.
- Turner, Clair C., et al. *School Health and Health Education*, 5th ed. St. Louis: The C. V. Mosby Company, 1970.

Secondary Level

- Foster, Julia C. *The Teaching of Health Education in Junior and Senior High Schools*. New York: J. Lowell Pratt & Co., 1966.
- Irwin, Leslie W., and Cyrus Mayshark. *Health Education in Secondary Schools*. St. Louis: The C. V. Mosby Company, 1964.

Elementary Level

- Humphrey, James H., et al. *Elementary School Health Education*. New York: Harper & Row, Publishers, 1962.
- Irwin, Leslie W., et al. *Health in Elementary Schools*, 2nd ed. St. Louis: The C. V. Mosby Company, 1966.
- Willgoose, Carl E. *Health Education in the Elementary School*, 3rd ed. Philadelphia: W. B. Saunders Company, 1969.

Related Books

- Dubos, René. *Mirage of Health*. Garden City, N.Y.: Doubleday Anchor Book, 1959.
- . *Man Adapting*. New Haven: Yale University Press, 1965.
- Dunn, Halbert L. *High Level Wellness*. Norfolk, Va.: R. W. Beatty, Ltd., 1961.

- Jourard, Sidney M. *The Transparent Self*. Princeton, N.J.: D. Van Nostrand, 1964.
- Lepp, Ignace. *Health of Mind and Soul*. Garden City, N.Y.: Image Books, 1968.
- Maslow, Abraham H. *Toward a Psychology of Being*. Princeton, N.J.: D. Van Nostrand, 1962.

Professional Journals and Periodicals

- American Journal of Public Health and the Nation's Health*
- Journal of the American College Health Association*
- Journal of Health, Physical Education and Recreation*
- Journal of School Health*
- Journal of Social Health*
- Research Quarterly*
- Safety Education*
- Today's Health*

Related Journals and Periodicals

- Consumer Reports*
- Education*
- The Education Digest*
- The Elementary School Journal*
- The Instructor*
- Journal of Education*
- Journal of Educational Psychology*
- Journal of Educational Sociology*
- National Education Association Journal*
- The National Elementary Principal*
- School and Society*
- Science*
- Science Digest*
- Sociology of Education*

If it is beyond the means of the individual instructor to purchase a number of these books and subscribe to two or three of the journals, the teacher can encourage the school library or other faculty to maintain an up-to-date library of books and periodicals. Then some sort of exchange program can be arranged between teachers so that all can benefit from the materials.

Contributing to the Profession Through Active Participation, Writing, Research, and Experimentation. Professional contributions are a most beneficial and rewarding experience. After one has conducted original research and/or experimentation, with significant results, he may want to make an additional contribution to the profession by submitting the results to a journal, such as the *New York State Journal of Health, Physical Education, and Recreation*, *California School Health*, the *Journal of Health, Physical Education, and Recreation*, or the *Journal of School Health*.

Writing and participation in one or more conferences or workshops takes

more than mere wishing. One must be well read, capable of communicating effectively, willing to work beyond the normal school hours, and dedicated to the principle that knowledge is to be shared. Many teachers guard their ideas and techniques closely. They do this for various reasons, one of which is that they feel that a successful new technique sets them apart from the other teachers. If others shared the "secret," this particular individual would be no different. Fortunately, however, most educators feel that offering ideas and research results to others leads to the betterment of the whole profession.

Basic sources of research that should be periodically consulted by every teacher include the following:

Encyclopedia of Educational Research. Chester W. Harris, ed. New York: The Macmillan Company, 1960.

Handbook of Research on Teaching. N. L. Gage, ed. Chicago: Rand McNally and Co., 1963.

Health, Physical Education, and Recreation Microcard Bulletin. School of HPER, University of Oregon. Eugene, Ore.: University of Oregon (semiannually).

Journal of Education Research. Madison, Wisconsin: Dembar Publications, Inc. (monthly).

NEA Research Bulletin. American Educational Research Association. Washington, D.C.: National Education Association (bi-monthly).

Research Quarterly. American Association of Health, Physical Education, and Recreation. Washington, D.C.: The Association.

Review of Educational Research. American Educational Research Association. Washington, D.C.: National Education Association (bi-monthly).

Continuing with One's Education. Continuing education is one area of personal and professional growth not yet discussed. It can include graduate study, reading, travel, and participation in educational programs outside of the school context. Graduate study will be covered more extensively here, for it is the best method of strengthening one's knowledge in a specialized field.

Although the present situation looks bleak, as indicated by the data on certification requirements in Chapter 1, it is hoped that the future will see an increased emphasis on strengthening teacher certification requirements in health education. The School Health Division of the AAHPER held a national conference on teacher preparation in health education. Its recommendation was that teachers of health in the secondary schools have a major in health education, with the minimal preparation being at least a health education minor.⁵

⁵National Conference Steering Committee, "Recommended Standards and Guidelines: Teacher Preparation in Health Education," *Journal of Health, Physical Education, and Recreation*, February, 1969, pp. 32-38.

With the complex task that has resulted from the explosion of knowledge, these recommendations seem necessary indeed. Enforcing this has come the requirement of several states that a master's degree or its equivalent in semester hours of college credit, plus a certain number of years of teaching experience be necessary to obtain a permanent certificate.

In view of the recommendations for teacher preparation in health education and the requirements of certain states, many students, as well as teachers, are contemplating graduate study. For those who are considering graduate work in health education, the question may be, "Where do they offer an advanced degree in health education?" Other questions asked by students are, "Am I qualified to go on to graduate school?" and, "How can I finance my education?"

Institutions Offering an Advanced Degree in Health Education In 1967, fifty-eight institutions offered a separate undergraduate degree in health education, fifty-seven colleges and universities offered a master's degree, and twenty-seven institutions offered work toward a doctorate degree.⁶ These schools range from Florida State University to Boston University to the University of California. Students who are interested in pursuing graduate work in health education should write the School Health Division of the American Association of Health, Physical Education, and Recreation and/or consult a member of the faculty of an institution which has a health education department.

Admission Requirements. Generally speaking, the trend among graduate schools within the last few years has been toward more flexible admission requirements. This has been based on a number of things. One of these has shown that not all students with good academic records in undergraduate school will make good in graduate school. It should also be remembered that some graduate schools make a distinction between admission to graduate school and admission to a program leading to a graduate degree. Requirements for the latter are often more strict than for the first.

Admission requirements for a graduate school or division usually include one or more of the following.

1. An undergraduate cumulative grade-point average which equals a C+ average or better. Some schools will not accept a student with an average below a B. Some are interested in the grade average in one's major only. Others are interested in the undergraduate's class standing.
2. A bachelor's degree or the equivalent from any college or university of recognized standing.

⁶*Institutions Offering Programs of Specialization in Health Education* (Washington, D C : School Health Education Study, December, 1967). 33 pp

3. One or more official transcripts of all previous college work.
4. Two or more letters of recommendation from persons in your field of specialization.
5. A qualifying examination either for all applicants or for those applicants with marginal undergraduate records. An institution may administer its own qualifying examination or give standardized test, in which case the applicant may be able to take the test at a local institution. Two of the most frequently used tests are the Graduate Record Examination (GRE) and the Miller Analogies Test (MAT). Information and addresses of test centers for the GRE can be obtained from the Educational Testing Service, 20 Nassau Street, Princeton, N.J. 08540; or Box 27896, Los Angeles, Calif. Information concerning the MAT can be obtained from the Psychological Corporation, 304 East 45th Street, New York, N.Y. 10017.

Financing an Education. It costs a lot of money to go to school today. Not only is tuition high, varying from \$300 to \$600 per semester at certain state colleges and universities, but one must also calculate the loss of income for those years he is not employed in his profession. Then the cost becomes staggering.

Many people who are actively teaching choose to continue their education on a part-time basis. Colleges and universities are more and more becoming aware of this need and are planning their graduate course listings with an eye to meeting the needs of the part-time student. Generally they accomplish this by offering necessary courses in the late afternoons and early evenings and on weekends. They also offer a wider range of classes during the summer. Some institutions do have specific residence requirements, requirements for full-time study and uninterrupted study, and time limits within which all degree requirements must be completed. Students should check carefully the specific requirements for the institution they are planning to attend.

Alternatives to part-time study are saving enough money to finance one's education or applying for fellowships and/or traineeships available at the majority of institutions. These include the following:

Notional Defense Education Act fellowships, which provide for three years of support based on student needs and the amount of money available at that particular institution.

Teaching fellowships, available in many departments. Instructional and other duties are required and recipients are usually restricted in the number of credits they may carry in one semester.

Research fellowships, also available in many departments. Duties and stipends vary.

Graduate assistantships, available in the instructional and research

programs of various departments. Duties vary according to the needs of individual departments.

Research assistantships, available in various departments to qualified graduate students. Stipends vary with the type of work and the amount of time involved.

Residence-hall assistantships, available in most institutions and requiring residence-hall duties with men or women undergraduates. Such assistantships provide varying amounts of room, board, and remuneration.

Many institutions also offer interest-free short-term loans through their office of financial aid.

All students should take the time to search out information concerning financial aid, fellowships, and traineeships that are available at the institutions of their choice as well as student loan information from their home state and banks.

SUMMARY

The educational scene is rapidly changing. Many teachers who have been professionally involved in elementary schools have seen the number of report cards dwindle to as few as two per year. College teachers are experimenting with student self-evaluation in many courses. The function of evaluation in the classroom is criticized, justified, and criticized again at every level. Many educators believe that evaluation should benefit the pupil; all too often it is used (sometimes too effectively) solely to aid the teacher.

There will always be subjectivity applied to every form of health evaluation. That is why a teacher must utilize every possible tool at his disposal in order to judge a student. If a teacher is truly interested in the growth of his students, he must attempt to understand their viewpoints, value their opinions, and evaluate their abilities in health with utmost objectivity, using every tool available.

Not only must a teacher remain a student of current evaluation methods, but he must also continue to develop himself. Almost any activity that keeps one abreast of the current scene can be considered a valuable addition to one's life style. Students are quick to see whether their instructors keep abreast of new thoughts and trends. To remain static is a sure way of losing not only the respect of one's students and colleagues but also the support of that part of the self which needs a continual renewal.

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APPENDIX *A*

Sources of Information in Family Living and Sex Education

The following references in family living and sex education are by no means meant to be complete or comprehensive. New references are published continually, and it is impossible to keep abreast of them.

No reference material should be used in a classroom situation without careful review or preview.

References on venereal disease have been omitted because it is felt that this subject should be treated as part of communicable-disease education.

No attempt has been made to list articles in professional journals and magazines because of the overwhelming number involved.

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Premarital Sex

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Sexual Revolution

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Information for Curriculum Planning in Family Life and Sex Education at the Elementary School Level

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*Information for Curriculum Planning in Family Life and Sex Education
at the Secondary Level*

- Anaheim Union High School District. *Family Life and Sex Education Course Outline Grades Seven Through Twelve*. Sally R. Williams, Coordinator, Anaheim, Calif.
- District of Columbia Public Schools. *Health and Family Life Education Curriculum—Senior High School*. Washington, D.C.
- District of Columbia Public Schools. *Health and Family Life Education Curriculum—Junior High School*. Washington, D.C.
- Jefferson City Public Schools. *Curriculum Guide for Family Living Education*. Jefferson City, Mo.
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- . *Social Hygiene Education Program*. San Diego, Calif.
- . *San Diego Sex Education Program*. San Diego, Calif.
- Schulz, Ester D., and Sally R. Williams. *Family Life and Sex Education: Curriculum and Instruction*. New York: Harcourt, Brace & World, Inc., 1969.
- Wisconsin Public Schools. *Guide to Health Education*. Madison, Wis.

RESOURCE AGENCIES IN THE UNITED STATES

Each organization listed below offers information in family life and sex education. Send for a brochure describing their policy and program interests and for lists of publications and materials.

- | | |
|---|---|
| American Academy of Pediatrics
1801 Hinman Ave.
Evanston, Ill. | Children's Bureau: U.S. Department of
Health, Education, and Welfare
Washington, D.C. 20201 |
| American Association of Marriage
Counselors, Inc.
27 Woodcliff Drive
Madison, N.J. 07940 | Child Study Association of America
9 E. 89th St.
New York, N.Y. 10028 |
| American Association for Health,
Physical Education and Recreation
1201 Sixteenth St., N.W.
Washington, D.C. 20036 | Family Life Bureau
United States of Catholic Conference
1312 Massachusetts Ave., N.W.
Washington, D.C. 20005 |
| American Home Economics Association
1600 20th St. N.W.
Washington, D.C. 20009 | Family Life Publications, Inc.
Box 6725
Durham, N.C. |
| American Institute of Family Relations
5287 Sunset Boulevard
Los Angeles, Calif. 90027 | Family Service Association of America
44 E. 23rd St.
New York, N.Y. 10010 |
| American Medical Association
535 North Dearborn Street
Chicago, Ill. 60610 | Institute for Rational Living, Inc.
33 W. 56th St.
New York, N.Y. 10019 |
| American Social Health Association
Dir. Family Life Education
1740 Broadway
New York, N.Y. 10019 | Institute for Sex Research, Inc.
University of Indiana
Bloomington, Ind. |
| | Maternity Center Association |

48 E. 92nd St.
New York, N.Y.

515 Madison Ave
New York, N.Y. 10022

National Council on Family Relations
1219 University Ave., S.E.
Minneapolis, Minn. 55414

Sex Information and Education
Council of the U.S. (SIECUS)
1855 Broadway
New York, N.Y. 10023

Planned Parenthood Federation of
America

Pamphlets

American Association of Health, Physical Education, and Recreation
NEA Publications-Sales
1201 16th Street, N.W.
Washington, D.C. 20036

Development of Healthy Sexuality

Sex Education—Where, When, and How Should It Be Taught?

What Parents Should Know About Sex Education in the Schools

American Medical Association
535 North Dearborn St.
Chicago, Ill.

Parents' Responsibility (parents)

A Story About You (ages five to six)

Finding Yourself (ages thirteen to fifteen)

Approaching Adulthood (ages sixteen to twenty)

Facts Aren't Enough (adults)

Why Girls Menstruate (young girls)

Contraceptive Drugs and Devices (adults)

Infertility (adults)

American Social Health Association, Inc.
1740 Broadway
New York, N.Y. 10019

Your Child's Questions (ages three to six)

Parents Tell Your Children (ages six to ten)

Know Your Daughter (ages ten to fourteen)

Know Your Son (ages ten to fourteen)

Boys Want to Know (ages thirteen +)

Girls Want to Know (ages thirteen +)

Preparing for Your Marriage

The Gift of Life

Child Study Association of America
Publishing Department
9 E. 89th St.
New York, N.Y. 10028

What to Tell Your Children About Sex

When Children Ask About Sex

Recommended Reading on Sex Education

Parents' Guide to Facts of Life for Children

Sex Education and the New Morality

The Wonderful Story of How You Were Born
Your Growing Child and Sex

Public Affairs Pamphlets

381 Park Avenue South

New York, N.Y.

How To Tell Your Children About Sex

Building Your Marriage

If I Marry Outside My Religion

Sex and Our Society

Sexual Adjustment in Marriage

So You Think It's Love

Too Young to Marry

Coming of Age: Problems of Teen-Agers

What Makes a Marriage Happy?

Saving Your Marriage

Science Research Associates, Inc.

259 East Erie St.

Chicago, Ill.

Understanding Sex

Sex Information and Education Council of the United States

1855 Broadway

New York, N.Y. 10023

Sex Education

Masturbation

Sexuality and the Total Personality

Premarital Sexual Standards

Companies Offering Literature for Girls

The Life Cycle Center

Box Jr-269

Neenah, Wis. 54956

You're a Young Lady Now (ages nine to eleven)

Very Personally Yours (ages twelve +)

Tell It Like It Is (about tampons)

The Miracle of You (preadolescent)

The Years of Self-discovery (adolescent)

You and Your Daughter (for mothers)

The Years of Independence (senior high school girls)

Education Director

Tampax Incorporated

161 E. 42nd St.

New York, N.Y. 10017

Accent on You (older girls)

Director of Education

Personal Products Co., Box 6G

Milltown, N.J.

Growing Up and Liking It (ages ten +)

Film Sources

Selected Films on Child Life, rev. 1965. Booklet compiled by Inez D. Lohr; Children's Bureau Publication No. 376; Price, \$.40. Order from Superintendent of Documents; U.S. Government Printing Office; Washington, D.C. This booklet gives a brief description of 480 films about children, from infancy through adolescence.

E. C. Brown Trust Foundation; 3170 S.W. 87th Ave.; Portland, Ore. 97225. Inquire about special films on human and animal beginnings and human growth, fertilization, and birth.

Minnesota Council on Family Relations; 1219 University Ave., S.E.; Minneapolis, Minn. 55414. *Family Life Literature and Films* (1967).

Planned Parenthood—World Population; 515 Madison Ave.; New York, N.Y. 10022. *Guide to Films* (1968).

U.S. Department of Health, Education, and Welfare. Order from Superintendent of Documents; U.S. Government Printing Office, Washington, D.C. *Selected Films on Child Life* (1965), *Selected Mental Health Films* (1967).

Films

As Boys Grow; black and white; 17 minutes. Emphasis on changes that take place in the primary and secondary sexual characteristics in adolescent boys and girls Junior High School. Medical Arts Production, P.O. Box 4042; Stockton, Calif.

A Concept of Family Life Education; color, 18 minutes. Designed to stimulate positive attitudes about sex in the development of personality, self-image, and the establishment of interpersonal relationships at an early age. High School Ortho Pharmaceutical Corporation, Raritan, N.J.

Biography of the Unborn, black and white; 16 minutes. Film shows the development of the egg, embryo, and fetus by means of diagrams and premature human specimens. High School Encyclopedia Britannica Films; 1150 Wilmetts Blvd., Chicago, Ill.

Boy to Man; color, 16 minutes. Shows developmental changes of boys from obvious physical growth to complete glandular changes and sexual maturation. Churchill Films; 662 North Robertson Blvd., Los Angeles, Calif.

Generation to Generation, color; 30 minutes. Film depicts the story of the coming of a baby into a family, animation shows the unfolding of life. Functioning of organs of human reproduction and the menstrual cycle, conception and development of the fetus, intrauterine nourishment, and elimination of waste by placenta. Animation shows the process of labor and birth. High School McGraw-Hill Text Films, 330 W. 42nd St., New York, N.Y.

Girl to Woman, color; 18 minutes. Shows the stages of the female maturation process, the variations in body structure, and the comparative differences in growth rate of boys of comparable age Junior High. Churchill Films, 662 North Robertson Blvd.; Los Angeles, Calif.

Helen in Paris, color; 15 minutes. Information on menstruation combined with importance of grooming, poise, good health, presented by an all-Negro cast. Personal Products Corporation; Milltown, N.J.

Human Beginnings; color; 22 minutes. Portrays what a group of young children believe about the origin of human life as expressed in their own drawings. Following this, a teacher answers questions and one of the children explains

how his parents prepared him for the coming of a new baby into the family. Good discussion film. For grades 5 to 7. Seminar Films; 480 Lexington Ave.; New York, N.Y.

Human Growth; color; 20 minutes. Class views and discusses animated film which traces process of reproduction. For grades 6 to 9. E. C. Brown Trust; 3170 S.W. 87th Ave.; Portland, Ore.

Human Heredity; color; 18 minutes. Presents through animation and live action the facts about sex determination, sex role, multiple births, human heredity, and the influences affecting individual behavior and attitudes. E. C. Brown Trust; 3170 S.W. 87th Ave.; Portland, Ore.

Human Reproduction; color; 23 minutes. Revision of the former "Human Reproduction" film produced in 1948. The reproductive process from conception to birth is presented by drawings and animation. Junior and Senior High School. McGraw-Hill; also American Medical Association; Medical Film Library; 535 North Dearborn St.; Chicago, Ill.

It's Wonderful Being a Girl; color; 20 minutes. Tells story of menstruation and offers guides to good health, grooming, and poise. Junior High School. Personal Products Corporation, Milltown, N.J.

Miracle of Reproduction; black and white; 15 minutes. Explains the human reproductive process by comparison with plant and animal life, using animated drawings for illustrations. For Elementary and Junior High School. Sid Davis Productions; 3826 Cochran Ave.; Los Angeles, Calif.

Molly Grows Up, black and white; 15 minutes. School nurse explains menstruation at school; both parents share in Molly's growing up. For girls 9 to 16 years of age. Personal Products Corporation; Milltown, N.J.

Phoebe—Story of Premarital Pregnancy; black and white; 20 minutes. Deals with the mental and emotional reactions of Phoebe, a teen-ager, when she discovers that she is pregnant. High School. McGraw-Hill Text Films; 330 W. 42nd St.; New York, N.Y.

Planned Families, color; 20 minutes. Through animation and film imagery, the functions of the male and female reproductive organs, how a baby is conceived, and how it develops are illustrated. The film presents birth control as a means of bringing children into the world by choice instead of by chance. Allend'or Productions; 3449 Cahuengo Blvd.; West Hollywood, Calif.

Reproduction in Animals; color, 11 minutes. Fundamental principles of reproduction in animals described with emphasis on each parent's function. For grades 5 to 7. Coronet Films; 65 East Southwater St.; Chicago, Ill. 60601.

The Game; black and white; 28 minutes. Introduces the problems of relationships between young members of the opposite sex—covering both premarital sexual behavior and individual relationships between boy and girl. The theme of the film revolves around the sexual exploitation of a girl by a boy. Senior High School. McGraw-Hill Films; 330 W. 42nd St.; New York, N.Y.

The Story of Menstruation; color; 15 minutes. Use of animated diagrams to show the menstruation process. For grades 5 to 7. Association Films, Inc.; 347 Madison Ave., New York, N.Y.

The Merry-Go-Round; black and white; 23 minutes. Presents the viewpoints on sex

and sex behavior of three well-known personalities: columnist Ann Landers, psychotherapist Albert Ellis, and educator Mary Winspear. McGraw-Hill Films; 330 W. 42nd St.; New York, N.Y.

World of a Girl; color; 20 minutes. Feelings and thoughts of the American girl in the process of growing up and living happily with menstruation. For grades 5 to 7. Scott Paper Co.; Philadelphia, Penn. 19113.

Your Body During Adolescence; black and white; 10 minutes. Puberty, what it means and how it affects the body, is the theme of this film. Shows growth through the influences of the pituitary and sex glands, brings about the changes that turn a boy into a man and a girl into a woman. For grades 4 to 10. McGraw-Hill Text Films; 330 W. 42nd St.; New York, N.Y.

Filmstrips

About Sex and Growing Up; color; sound. Four filmstrips running about 10 minutes each. Develops positive feelings and stimulates curiosity about puberty. Describes the emotional and physical changes experienced by boys and girls as they enter puberty. Junior and Senior High School. Cathedral Films, Inc., 2921 W. Alameda Ave.; Burbank, Calif. 91505.

Developing Basic Values; color; sound. Set of four filmstrips with records which emphasize the development of moral and ethical values in everyday settings. For grades 5 to 7. Society for Visual Education; 1435 Diversey St., Chicago, Ill. 60614.

Family Relationships and Young Teens; color; sound. Set of four filmstrips with records emphasizing the importance of good family relations.

Learning to Understand Parents (46 frames).

Living with Brothers and Sisters (47 frames).

Helping at Home (41 frames).

Teenage Allowances (45 frames).

For grades 5 to 7. Society for Visual Education; 1435 Diversey St.; Chicago, Ill. 60614.

Family Life and Sex Education; color; sound. The following sound filmstrips are for use in family life, home economics, and health and sex education courses.

Values for Teenagers: The Choice Is Yours

I Never Looked at It That Way Before

Sex: A Moral Dilemma for Teenagers

The Tuned Out Generation

And They Lived Happily Ever After?

Guidance Associates; P.O. Box 5; Pleasantville, N.Y. 10570. (Teachers' guide is available.)

How Babies Are Made; color; 34 slides. Created not just to help parents, but to strengthen the parent-child relationship by enabling the basic facts of sex education to be an experience shared by father, mother, and child together. Tells the story of reproduction with accuracy, simplicity, and beauty. For ages 3 to 10. Creative Scope, Inc.; 509 Fifth Ave.; New York, N.Y.

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Human Growth; color; 20 minutes. Class views and discusses animated film which traces process of reproduction. For grades 6 to 9. E. C. Brown Trust; 3170 S.W. 87th Ave.; Portland, Ore.

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The Tuned Out Generation

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Guidance Associates; P.O. Box 5; Pleasantville, N.Y. 10570. (Teachers' guide is available.)

How Babies Are Made, color; 34 slides. Created not just to help parents, but to strengthen the parent-child relationship by enabling the basic facts of sex education to be an experience shared by father, mother, and child together. Tells the story of reproduction with accuracy, simplicity, and beauty. For ages 3 to 10. Creative Scope, Inc.; 509 Fifth Ave.; New York, N.Y.

APPENDIX *B*

Sources of Information for Drug-Abuse Education

RESOURCE MATERIALS FOR STUDENTS¹

Pamphlets

American Medical Association; 535 North Dearborn St.; Chicago, Ill. 60610

The Crutch That Cripples Drug Dependence OP-163

Amphetamines OP-197

Barbiturates OP-196

Glue Sniffing OP-195

LSD OP-194

Marihuana OP-198

Drug Dependence OP-233

Poster Series

Poisons in the Medicine Chest

Poison-proof Your Home

The Unseen Killer—Carbon Monoxide

American Social Health Association; 1740 Broadway; New York, N.Y. 10019

The Glue Sniffing Problem NA-2

The Narcotic Addiction Problem NA-1

Division of Consumer Education; Food and Drug Administration; U.S. Depart-

¹It is suggested that the interested teacher order and review these materials before use

ment of Health, Education, and Welfare; Washington, D.C. 20402

Drugs and Driving

FDA Student Reference Sheet, Habit-Forming Drugs SR-2

FDA Student Reference Sheet, Drug Side Effects SR-4

FDA Student Reference Sheet, Hallucinogenic Drugs SR-14

Inquiries Branch; Public Health Service; U.S. Department of Health, Education, and Welfare; Washington, D.C. 20201

Hooked (Comicbook format) PHSP-1610

Narcotic Drug Addictian No 1021

National Institute of Mental Health, 5454 Wisconsin Avenue, Chevy Chase, Md. 20015

LSD 1828

Narcotics 1827

The Up and Down Drugs 1830

Marihuana 1829

Pharmaceutical Manufacturers Association; Washington, D.C.

Medicinal Narcotics

Signal Press; 1730 Chicago Ave.; Evanston, Ill., 60201

What Can We Do About Drug Abuse, Saltman

Facts About Narcotics, Vogel and Vogel

Smith, Kline & French Laboratories, Philadelphia, Pa.

Drug Abuse: The Empty Life

Superintendent of Documents; U.S. Government Printing Office; Washington, D.C. 20402

How Safe Are Our Drugs?

The Use and Misuse of Drugs

Drugs and Driving

Barbiturates as Addicting Drugs

Drugs and Your Body

Drugs of Abuse

LSD—The False Illusion

The Dangers of Marihuana

Runningawayness

Young Scientists Look at Drugs

Books

Curtis, Lindsay R. *Why Not Marijuana*. Evanston, Ill.: Signal Press.

———. *LSD—Trip or Trap*. Evanston, Ill.: Signal Press.

———. *Glue Sniffing*. Evanston, Ill.: Signal Press.

———. *Let's Talk About Drugs*. Evanston, Ill.: Signal Press.

———. *Let's Talk About Goof Balls and Pep Pills*. Evanston, Ill.: Signal Press.

Eyerly, Jeannette. *Escape From Nowhere*. Philadelphia: J. B. Lippincott Co., 1968.

Read, Donald A. *Drugs and People*. Boston: Allyn and Bacon, Inc., 1969. (Teachers' Manual.)

Selected Reference Books for Teachers, Curriculum Planners, and Adults

- Abramson, H. *The Use of LSD in Psychotherapy and Alcoholism*. Indianapolis, Ind.: The Bobbs-Merrill Co., Inc. 1967.
- Adriani, J. (ed.). *Norcotics and Narcotic Antagonists*. Springfield, Ill.: Charles C Thomas, 1964.
- Agnew, D. *Undercover Agent—Narcotics*. New York: McFadden-Bartell, 1959.
- Alexander, M. *The Sexual Paradise of LSD*. North Hollywood, Calif.: Brandon House, 1967.
- Alpert, R., and S. Cohen, *LSD*. New York: New American Library, 1967.
- American Council on Alcohol Problems, Inc. *The Problem: Alcohol-Narcotics, Teacher's Handbook*, 1966; 119 Constitution Ave., N.E.; Washington, D.C., 20002.
- Andrews, G., and S. Vinkenoog (ed.). *The Book of Grass—An Anthology of Indian Hemp*. New York: Grove Press, 1967.
- Anslinger, H. J. *The Protectors*. New York: Farrar, Straus and Giroux, Inc., 1961.
- Anslinger, H. J., and W. Oursler. *The Murderers*. New York: Farrar, Straus and Giroux, Inc., 1961.
- Anslinger, H. J., and W. F. Tompkins. *The Traffic in Narcotics*. New York: Funk and Wagnalls, 1953.
- Becker, H. S. *The Outsider*. New York: The Free Press, 1963.
- Beckman, H. *Dilemmas in Drug Therapy*. Philadelphia: W. B. Saunders Co., 1967.
- Bett, W. R., L. H. Howells, and A. D. MacDonald. *Amphetamine in Clinical Medicine: Actions and Uses*. London: E. and S. Livingstone, 1954.
- Bloomquist, E. R., M.D. *Marijuana*. Beverly Hills, Calif.: Glencoe Press, 1968.
- Blum, R., et al. *The Utopiotes*. New York: Atherton Press, 1964.
- Blum, R., et al. *Society and Drugs*, Vols. I & II. San Francisco: Jossey-Bass, Inc., 1969.
- Brown, T. T. *The Enigma of Drug Addiction*. Springfield, Ill.: Charles C Thomas, 1961.
- Caldwell, A. E. *Psychopharmoca—A Bibliography of Psychopharmoca, 1952–1967*. Washington, D.C.: U.S. Movement Printing Office, 1958.
- Cashman, J. *The LSD Story*. Greenwich, Conn.: Fawcett Publications, 1966.
- Chein, I. *The Road to H*. New York: Basic Books, 1964.
- Cohen, S. *The Beyond Within: The LSD Story*. New York: Atheneum, 1964.
- Cohen, Sidney. *The Drug Dilemma*. New York: McGraw-Hill Book Company, 1969.
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American Association of Health, Physical Education, and Recreation, Department of National Education Association; 1201 Sixteenth Street, N.W.; Washington, D.C. 20036.

Drug Abuse: A Primer for Parents

American Social Health Association; 1740 Broadway; New York, N.Y. 10019

The Life Cycle of the Narcotic Addict and of Addiction

Drug Abuse: A Call for Action

The Underground Bird

The Use of Drugs by Jazz Musicians

A Guide to Some Drugs Which Are Subject to Abuse

Food and Drug Administration; U.S. Department of Health, Education, and Welfare, U.S. Government Printing Office, Washington, D.C. 20402

How Safe Are Drugs? (No. 44)

The Use and Misuse of Drugs (No. 46)

Bureau of Narcotics; U.S. Treasury Department, Washington, D.C. 20226

Living Death—The Truth About Drug Addiction

The Federal Narcotics Laws

Superintendent of Documents; U.S. Government Printing Office; Washington, D.C. 20402

LSD: Some Questions and Answers

Marijuana: Some Questions and Answers

Narcotics: Some Questions and Answers

Task Force Report: Narcotics and Drug Abuse

Prevention and Control of Narcotic Addiction

Traffic in Opium and Other Dangerous Drugs

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FILMS ON DRUG-ABUSE EDUCATION²

Since there is a difference of opinion on the effectiveness of the various films listed, this listing does not constitute an endorsement of any film by the National Coordinating Council. In fact, the Council recommends that anyone planning on using any film on drug abuse should obtain a print and review it prior to its intended use. The names and addresses of the producers and/or distributors are included in this listing to provide a source of information on rental and purchases. In conjunction with the film list we wish to call your attention to other film reviews that are available. One such review of films on drug-abuse education appears in the *School Health Education Study Teacher-Student Resources*. A copy of this publication may be obtained from the 3M Company, Visual Products Division, 3M Center, St. Paul, Minn., 55101. A second review of films appears in a series of articles by David O. Weber, Film Consultant, in the August and September, 1968, issues of *California Health*. A third annotated list of films appears in *Drug Abuse: Escape to Nowhere—A guide for Educators*, published by Smith, Kline & French Laboratories in cooperation with the American Association for Health, Physical Education, and Recreation, a department of the National Education Association.

Bennies and Goofballs (National Medical Audiovisual Center, Chamblee, Ga. 30005). A special report by the Food and Drug Administration on abuse of amphetamines and barbiturates. (20 minutes)

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- Beyond LSD* (Film Associates, 11559 Santa Monica Boulevard, Los Angeles, Calif. 90025). Describes the communication gap between two generations—teenagers and young adults on one hand and the generation of those over thirty. The teenagers' use of LSD and other drugs is only one of the symptoms of this communication gap. In this film, a group of parents seek help in order to understand their relationships with their teenagers. (25 minutes)
- Drug Addiction* (Encyclopaedia Britannica Films, 38 West 32nd Street, New York, New York 10017). A film provided by the Encyclopaedia Britannica Educational Corporation, New York City. (22 minutes)
- Drugs and the Nervous System* (Churchill Films, 662 North Robertson Boulevard, Los Angeles, Calif. 90069). The film explains how drugs affect many different parts of the body by working indirectly on the nervous system. It is designed to reach children at an age before many of them, it is hoped, have begun to experiment with drugs. (18 minutes)
- False Friends* (Sound Services, Limited, 269 Kingston Road, Merton Park, London, S.W. 19, England). Drug dependence is the subject of this color cartoon produced for WHO in London by G. Bucklandsmith of Interfilm in association with the Film Producer's Guild. The story is told in words and pictures. (10 minutes)
- Fight or Flight* (International Association of Chiefs of Police, 1319 18th Street, N.W., Washington, D.C.). Film produced by IACP in cooperation with the federal Bureau of Narcotics on the uses of marijuana, LSD and "pills." (16 minutes)
- Hide and Seek* (Center for Mass Communication of Columbia University Press, 440 West 110th Street, New York, 10025). This is a boy's personal story of his life as an addict.
- Hoaked* (Churchill Films, 662 N. Robertson Boulevard, Los Angeles, Calif. 90059). This is a description of the experience of drug addiction told in the words of young (age 18–25) former addicts. They talk about what impelled them to become addicted, how it affected their relationship with others and their perception of themselves and how they regard the experience in retrospect. (20 minutes)
- LSD* (Audiovisual Branch, United States Navy, Pentagon, Washington, D.C.). A lecture-type film developed by the Surgeon General's Office, U.S. Navy. (28 minutes)
- LSD-25* (Professional Arts, Inc., P.O. Box 8484, Universal City, Calif. 91608). *LSD-25* is a documentary designed to convey the facts about LSD to the growing audiences concerned about the drug scene and its impact upon youth. (27 minutes)
- LSD: Insight or Insanity* (Bailey Films, 6509 De Longpre Avenue, Hollywood, Calif. 90028). This film documents the dangers in the unsupervised use of LSD, explains what medical science knows of the physiologic actions of LSD and counteracts a few of the erroneous claims made for the use of LSD. (26 minutes)
- LSD Trip—or Trap!* (Sid Davis Productions, 2429 Ocean Boulevard, Santa Monica, Calif. 90405). Two teenage boys, Bob and Chuck, both 17, have many interests in common and enjoy each other's company. When another boy, Frank, tries to introduce them to LSD, they disagree. While Chuck lets himself be persuaded to join Frank's acidheads, Bob decides to find out the truth about the notorious drug for himself. What he learns is disturbing to him and he realizes that he

must warn his friend, who by now is firmly ensconced with Frank's crowd and already has taken several "trips." Bob puts his findings and feelings in a letter but on his way to mail it, Bob comes upon a grisly accident. Chuck has had a shattering recurrence of the LSD effects while driving, lost control of his car and rammed head-on into another car. Chuck is dead. (26 minutes)

Marijuana (Bailey Films, 6509 De Longpre Avenue, Hollywood, Calif. 90028). A pot party is interrupted by police . . . screaming, testing teenagers are caught and they speak out. A teenager idol (Sonny Bono) provokes the teenagers to think for themselves. (34 minutes)

Mind Benders (National Medical Audiovisual Center, Chamblee, Ga. 30005). Mind benders explores the potential therapeutic uses and the known hazards of LSD and other hallucinogens as well as some of the motivations of abusers. Medical authorities and users of the drugs appear in the FDA documentary (26 minutes)

Narcotics: A Challenge to Teachers (The Narcotic Educational Foundation of America, 5055 Sunset Boulevard, Los Angeles, Calif. 90027). Narrated by Lowell Thomas, film provides basic information about narcotics and other drugs of abuse. The film challenges educators to combat student drug abuse by presenting young people with the facts about drug experimentation. (24 minutes)

Narcotics: Put of Despair (Film Distributors International, 2223 S. Olive, Los Angeles, Calif. 90007). Designed to teach youngsters the perils of narcotics addiction. It shows how inexperienced young people are led to seek refuge in tobacco, alcohol, barbiturates. Then malignant companions, masquerading as true friends, introduce marijuana and opiates. (25 minutes)

Narcotics—The Inside Story (Charles Cahill and Associates, Inc., P.O. Box 3220, Hollywood, Calif. 90007). This film is designed to acquaint junior and senior high school students with the positive applications of narcotics and drugs when administered by doctors for medical purposes. The inside story is that experimenting with drugs and narcotics can seriously—even permanently—upset the central nervous system. (12 minutes)

Narcotics—Why Not? (Charles Cahill and Associates, Inc., P.O. Box 3220, Hollywood, Calif. 90028). Sixteen male and female residents of the California Rehabilitation Center relate how they were introduced to pills, glue, marijuana, and heroin—what it was like—and the hopes they hold for the future (15 minutes)

Seduction of the Innocent (Sid Davis Productions, 2429 Ocean Park Boulevard, Santa Monica, Calif. 90405). A short film dealing with an ever-increasing menace to our youth. It is a story of two young people, a boy and a girl, who through a need to belong and a desire to go along with the group and its youthful zest to try something new, begin a one-way journey to self-destruction. (10 minutes)

The Addicted (Association Films, Inc., 600 Grand Avenue, Ridgefield, N.J. 07657). A film in two parts on drug addiction. (50 minutes)

The Agents of Drug Abuse (Penelope Films, Inc., 1440 Clay Street, San Francisco, Calif. 94109). A review of all drugs of abuse, discussing levels of abuse, effects, legal consequences and penalties pertaining to the various agents of drug abuse. (38 minutes)

The Dangerous Drugs (The Narcotic Educational Foundation of America, 5055

Sunset Boulevard, Los Angeles, Calif.). This film portrays the dangers from abuse of amphetamine and barbituratedrugs—accidents, physical dependence, ruined health, even death. A candid account by a female abuser underscores the points made in the preceding vignettes. The potential relationship of heroin abuse and abuse of non-narcotic drugs is noted. (22 minutes)

The Losers (Carousel Films, Inc., 1501 Broadway, New York, N.Y. 10036). Produced and originally presented by WCBS-TV, New York, examines the prevalence of experimentation and the habitual use of chemical and drugs among youngsters from 12–21 years old. (31 minutes)

The Riddle (Public Affairs, Office of Economic Opportunity, 1200 19th Street, N.W., Washington, D.C. 20506). The camera follows actual glue-sniffers, cough medicine drinkers, and heroin addicts into the alleys, tenements and physicians' offices where their candid comments and bewildered responses clearly show the hopelessness of their lives. By contrast, an account of a youth who resists the drug abuse crowd to land a job strikes a hopeful note. (28 minutes)

The Seekers (State of New York Narcotic Addiction Control Commission, Albany, N.Y. 12203). A half-hour documentary on drug abuse prepared by the New York State Narcotic Addiction Control Commission. (30 minutes)

Trip to Where (Produced by DuArt Films Labs, 145 West 55th Street, New York, New York 10019; available from Naval District, Washington, D.C., Building 200, Navy Yard Annex, U.S. Navy, Washington, D.C. 20390). Film presents dangers of use and abuse of three basic groups of drugs: amphetamines, barbiturates and hallucinogens—including marijuana and emphasizing LSD. Points out psychological and physical effects, especially in relation to potentially dangerous effects on individual performance in critical operations. (49 minutes)

Way Out (Valley Forge Films, Inc., Chester Springs, Pa. 19425). A theatrical trip into the world of drug addiction. The principal roles are played by eight real life addicts who have kicked the heroin habit. (105 minutes)

AUDIO-VISUAL PROGRAMS

DCA Educational Products. Two sets of colored transparencies developed in consultation with the Food and Drug Administration by DCA Educational Products, Inc., 4865 Stenton Ave., Philadelphia, Pa. 19144. The first set consists of 22 units on, "How Safe Are Our Drugs," at \$54.75 and the second series, 20 units on, "The Use and Misuse of Drugs," at \$59.75. Complete transparency set, \$114.50.

Lockheed Missiles and Space Company. A 15-hour course of instruction aimed at junior and senior high school students entitled, "Drug Decision," consisting of a three-hour movie-animation segment produced by Warner Brothers; 300-page student response and decision manual; five-hour teacher preparation and data file. Price on request from Lockheed Information Systems, Box 504, Sunnyvale, Calif. 94088.

Raytheon Learning Systems Company. Set of ten filmstrips on drugs, each with record, teachers guide, and pad of 50 score sheets for student participation. Series covers: "Barbiturates and Amphetamines," "Marijuana," "LSD," "Narcotics," and "Teenagers and Drugs." Complete drug set \$250.00 from

Raytheon Learning Systems Company, 475 South Dean Street, Englewood, N.J. 07631.

School Health Education Study (3M Company) A Unified and comprehensive health education program developed by the School Health Education Study, 1507 M Street, N.E., Room 800, Washington, D.C. 20005 and marketed by 3M Company, Box 3100, 3M Center, St. Paul, Minn. 55101. Set of four books in four grade levels from kindergarten through 12th grades, plus teacher-student resource on, "Use of Substances That Modify Mood and Behavior," set \$10.00 from 3M Education Press, Box 3344, St. Paul, Minn. 55101. Four sets of color transparencies, each containing 20 visuals for Level 1 (Kindergarten through 3rd grades); four sets for Level 2 (4th through 6th grades); five sets for Level 3 (7th through 9th grades), and six sets for Level 4 (10th through 12th grades), \$33.00 per set.

Texas Alcohol Narcotics Education, Inc Film strip with 33 $\frac{1}{3}$ rpm record and booklet on each of five subjects: "Alcohol: Fun or Folly"; "Smoking... or Health"; "Glue Sniffing: Big Trouble in a Tube"; "LSD: Trip or Trap," and "Why Not Marijuana." Authored by Lindsay R. Curtis, M.D., for the Texas Alcohol Narcotics Education, Inc., 2814 Oak Lawn Avenue, Dallas, Tex. 75219, \$10.95 per set.

ADDITIONAL SOURCES

The following agencies are excellent sources of continuing, up-to-date information on drugs and drug abuse.

Bureau of Narcotics
United States Treasury Department
Washington, D.C.
District Offices

<i>District</i>	<i>Territory</i>	<i>Headquarters</i>
1	Maine, New Hampshire, Vermont, Rhode Island, Massachusetts and Connecticut	1425 Post Office and Courthouse Building Boston, Massachusetts 02109
2	New York State and the Newark District of New Jersey	90 Church Street, Suite 605 New York, New York 10007
3	Pennsylvania, Delaware and Camden District of New Jersey	605 U.S. Custom House Philadelphia, Pennsylvania 19106
4	Maryland, District of Columbia, North Carolina, Virginia and West Virginia	103 South Gay Street, Room 301 Baltimore, Maryland 21202
5	Georgia, Florida, Alabama, South Carolina and Tennessee	1056 Federal Office Building Atlanta, Georgia 30303
6	Michigan, Kentucky and Ohio	602 Federal Building Detroit, Michigan 48226

<i>District</i>	<i>Territory</i>	<i>Headquarters</i>
7	Illinois, Indiana and Wisconsin	1836 U.S. Courthouse and Federal Office Building Chicago, Illinois 60604
8	Texas, Louisiana and Mississippi	1114 Commerce Street Dallas, Texas 75202
9	Missouri, Kansas, Arkansas and Oklahoma	1502 Federal Office Building Kansas City, Missouri 64106
10	Minnesota, Iowa, Nebraska, North Dakota and South Dakota	402 Federal Building Minneapolis, Minnesota 55401
11	Colorado, Utah, Wyoming and New Mexico	106 U.S. Custom House Denver, Colorado 80202
12	California, Nevada and Arizona	450 Golden Gate Avenue San Francisco, California 94102
13	Washington, Oregon, Idaho, Montana, Alaska and Hawaii	311 U.S. Courthouse Seattle, Washington 98104

**Bureau of Drug Abuse Control
Food & Drug Administration
Crystal Plaza Building No. 6
2121 Jefferson Davis Highway
Arlington, Virginia 22202**

Atlanta Field Office
1831 Peachtree Road, N E
Atlanta, Georgia 30309
404-526-3111

Resident Offices:
Columbia, South Carolina
Jackson, Mississippi
Miami, Florida
Nashville, Tennessee

Baltimore Field Office
401 Water Street
Baltimore, Maryland 21202
301-962-4800

Resident Offices:
Greensboro, North Carolina
Washington, D.C

Boston Field Office
John F. Kennedy Federal Building
Room E-311
Boston, Massachusetts 02203
617-223-6666

Resident Office:
Hartford, Connecticut

Chicago Field Office
Engineering Building, Suite 1700
205 West Wacker Drive
Chicago, Illinois 60606
312-828-5850

Resident Offices
Cincinnati, Ohio
Cleveland, Ohio
Detroit, Michigan
Indianapolis, Indiana

Dallas Field Office
1114 Commerce Street
Dallas, Texas 75202
214-749-3631

Resident Offices:
Albuquerque, New Mexico
New Orleans, Louisiana
San Antonio, Texas

Denver Field Office
New Custom House
721 19th Street
Denver, Colorado 80202
303-297-4291

Resident Office
Salt Lake City, Utah

Kansas City Field Office
U.S. Courthouse, Room 225
811 Grand Avenue
Kansas City, Missouri 64106
816-374-5604

Resident Offices
Minneapolis, Minnesota
St. Louis, Missouri

Los Angeles Field Office
Petroleum Building
714 West Olympic Boulevard
Suite 1010

Los Angeles, California 90015
213-688-2650

Resident Offices
San Diego, California
San Francisco, California
Seattle, Washington

New York Field Office
201 Varick Street
Room 1051-A
New York, New York 10014
212-620-3334

Resident Offices
Buffalo, New York
Philadelphia, Pennsylvania
Pittsburgh, Pennsylvania

**National Institute of Mental Health
Barlow Building, Chevy Chase, Md. 20015**

Region I, Boston, Mass
John F. Kennedy Federal Building
Boston, Mass 02203
617-223-6824

Connecticut, Maine, Massachusetts, New
Hampshire, Rhode Island, Vermont

Region II, New York, N.Y.
Room 1200, 42 Broadway
New York, N.Y. 10004
212-264-2567

Delaware, New Jersey, New York,
Pennsylvania

Region III, Charlottesville, Va
200 Seventh Street NE
Charlottesville, Va 22901
703-296-5171, Extension 278/253/420

District of Columbia, Kentucky, Maryland,
Puerto Rico, North Carolina, Virgin
Islands, Virginia, West Virginia

Region IV, Atlanta, Ga
Room 404, 50 Seventh Street NE
Atlanta, Ga 30323
404-526-5231

Alabama, Florida, Georgia, Mississippi,
South Carolina, Tennessee

Region V, Chicago, Ill.
Room 712, New Post Office Bldg
433 West Van Buren Street
Chicago, Ill 60607
312-828-5228

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APPENDIX *C*

*Status of State Certification in Health Education**

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STATUS OF STATE CERTIFICATION IN HEALTH EDUCATION

The following data were obtained from responses to a questionnaire sent to teacher-certification departments in each of the fifty states. Information for one state was provided by a college professor. Responses were obtained from forty-five states. Because information was not complete in a few instances, the number of states reported on the tables varies from forty-three to forty-five. The findings are discussed for each of the six tables which summarize data for the six items on the questionnaire. Items on the questionnaire are reproduced on the last page of this report.

* Reprinted by permission from AAHPER Conference on Teacher Preparation in Health Education, Washington O.C., February 8, 1968.

Table I. Health education as a teaching major for elementary and secondary school teaching certification.

1. Health education is recognized as a teaching major for elementary school teacher certification in fifteen of forty-three states.
2. Health education is recognized as a teaching major for secondary school teacher certification in thirty-two of forty-three states.
3. Health education is recognized as a major at both the elementary and secondary level in fifteen of the forty-three states.

Table II. Health education as a teaching minor for elementary and secondary school teaching certification.

1. Health education is recognized as a teaching minor for elementary school teacher certification in twenty of forty-three states.
2. Health education is recognized as a teaching minor for secondary school teacher certification in thirty-two of forty-three states.
3. Health education is recognized as a minor at both the elementary and secondary levels in twenty of the forty-three states.

Table III. Teachers restricted to teaching subjects for which they have completed either a major or a minor.

1. Teachers are restricted to teaching in a major or a minor at the elementary school level in eleven of the forty-three states. (With the general pattern of one teacher being responsible for all or most subjects at the elementary school level the meaning of this information is not clear.)
 - a. It is possible that specialists in health education are required in the eleven states.
 - b. It is possible that specialists are required for all subjects in the eleven states (but not likely).
 - c. It could mean that at upper elementary school levels a major or minor is required as was indicated for West Virginia.
 - d. It could mean that the item on the questionnaire was unclear or was misinterpreted.
2. Teachers are restricted to teaching in a major or a minor at the secondary level in twenty-seven of the forty-three states. This would suggest that health education, if it is taught, could be taught by an unprepared person in sixteen of the states.

Table IV. Health education as a separate subject or combined with another subject in certification requirements.

1. In twenty-five of forty-five states health education is recognized as a separate subject in teacher-certification requirements.

2. In thirty-four of forty-five states health education can be combined with another subject or subjects in teacher-certification requirements.
3. In seventeen of forty-five states health education is recognized as a separate subject and as a subject combined with another subject in teacher-certification requirements.
4. In states where health education can be combined with another subject or other subjects in teacher certification, physical education is the other subject specified in twenty-eight of forty-five states. Health education can be combined with safety, biology or biological science, physical education and safety, physical education and recreation, and physical education, recreation, and safety in some states. Colorado supports combinations as provided by preparing institutions.

Table V. Requirements in health education for all elementary certification candidates.

1. In twenty-one of forty-four states no preparation is required in health content, school health program, or health instruction.
2. In twenty-three states no preparation is required in health content; in thirty-two states no preparation is required in the school health program; and in thirty-four states no preparation is required in health program; and in thirty-four states no preparation is required in health instruction.
3. In the twenty-three states which require some preparation there is a wide variation in the requirements.

Table VI. Requirements in health education for all secondary certification candidates.

1. In twenty-seven of forty-three states no preparation is required in health content, the school health program, or health instruction.
2. In twenty-eight states no preparation is required in health content; in thirty-five states no preparation is required in the school health program; and in thirty-seven states no preparation is required in health instruction.

TABLE I

**Health Education as a Teaching Major for Elementary and Secondary
School Teaching Certification**

<i>State</i>	<i>Elementary School</i>	<i>Secondary School</i>
Alabama	No	Yes
Arizona	No	Yes
Arkansas	No	No
California	Yes	yes
Colorado	Yes	Yes
Connecticut	Yes	Yes
Florida	No	Yes
Georgia	Yes	Yes
Hawaii	Yes	Yes
Illinois	Yes	Yes
Indiana	Yes	Yes
Iowa	No	No
Kentucky	No	Yes
Louisiana	No	Yes
Maryland	No	Yes
Massachusetts	Yes	Yes
Michigan	Yes	Yes
Minnesota	No	Yes
Mississippi	No	Yes
Missouri	No	Yes
Montana	No	Yes
Nebraska	Yes	Yes
Nevada	No	Yes
New Hampshire	No	No
New Jersey	No	Yes
New Mexico	No	No
New York	No	No
North Carolina	No	Yes
North Dakota	Yes	Yes
Ohio	No	Yes
Oklahoma	Yes	Yes
Oregon	Yes	Yes
Pennsylvania	Yes	Yes
South Dakota	No	Yes
Tennessee	No	Yes
Texas	No	No
Utah	No	Yes
Vermont	No	No
Virginia	No	No
Washington	Yes	Yes
West Virginia	No	No
Wisconsin	No	No
Wyoming	No	No

TABLE II
Health Education as a Teaching Minor for Elementary and Secondary
School Teaching Certification

<i>State</i>	<i>Elementary School</i>	<i>Secondary School</i>
Alabama	No	Yes
Arizona	Yes	Yes
Arkansas	No	No
California	Yes	Yes
Colorado	Yes	Yes
Connecticut	Yes	Yes
Florida	No	Yes
Georgia	No	No
Hawaii	No	No
Illinois	Yes	Yes
Indiana	Yes	Yes
Iowa	No	No
Kentucky	No	Yes
Louisiana	No	Yes
Maryland	No	No
Massachusetts	Yes	Yes
Michigan	Yes	Yes
Minnesota	Yes	Yes
Mississippi	Yes	Yes
Missouri	Yes	Yes
Montana	No	Yes
Nebraska	Yes	Yes
Nevada	No	Yes
New Hampshire	No	No
New Jersey	No	Yes
New Mexico	No	No
New York	Yes	Yes
North Carolina	No	Yes
North Dakota	Yes	Yes
Ohio	No	Yes
Oklahoma	Yes	Yes
Oregon	Yes	Yes
Pennsylvania	Yes	Yes
South Dakota	Yes	Yes
Tennessee	No	Yes
Texas	No	No
Utah	No	Yes
Vermont	No	No
Virginia	No	No
Washington	Yes	Yes
West Virginia	No	No
Wisconsin	No	Yes
Wyoming	Yes	Yes

TABLE III

Teachers Restricted to Teaching Subjects for Which They Have
Completed Either a Major or a Minor

<i>State</i>	<i>Elementary School</i>	<i>Secondary School</i>
Alabama	No	Yes
Arizona	No	Yes
Arkansas	No	No
California	No	Yes
Colorado	No	No
Connecticut	No	Yes
Florida	No	No
Georgia	Yes	Yes
Hawaii	Yes	Yes
Illinois	No	Yes
Indiana	Yes	Yes
Iowa	No	Yes
Kentucky	No	No
Louisiana	No	Yes
Maryland	Yes	Yes
Massachusetts	No	No
Michigan	No	Yes
Minnesota	No	Yes
Mississippi	No	Yes
Missouri	Yes	Yes
Montana	No	Yes
Nebraska	No	No
Nevada	No	Yes
New Hampshire	Yes	Yes
New Jersey	No	Yes
New Mexico	No	No
New York	No	No
North Carolina	Yes	Yes
North Dakota	No	No
Ohio	No	Yes
Oklahoma	Yes	No
Oregon	No	No
Pennsylvania	No	Yes
South Dakota	No	No
Tennessee	No	No
Texas	No	Yes
Utah	Yes	Yes
Vermont	No	No
Virginia	No	No
Washington	Yes	Yes
West Virginia	No (Yes above sixth grade)	Yes
Wisconsin	No (Health)	No
Wyoming	Yes	Yes

TABLE IV

**Health Education as a Separate Subject or Combined with Another
Subject in Certification Requirements**

<i>State</i>	<i>Separate</i>	<i>Combined</i>	<i>Subjects Combined with</i>
Alabama	No	Yes	Phys. ed.
Arizona	No	Yes	Phys. ed.
Arkansas	No	Yes	Phys. ed.
California	Yes	No	
Colorado	Yes	Yes	Varies with institutions
Connecticut	Yes	Yes	Phys. ed.
Delaware	Yes	Yes	Phys. ed.
Florida	Yes	Yes	Biological science
Georgia	Yes	No	
Hawaii	No	Yes	Phys. ed.
Illinois	Yes	Yes	Phys. ed.
Indiana	No	Yes	Phys. ed.; safety
Iowa	No	Yes	Phys. ed.
Kentucky	Yes	Yes	Phys. ed., safety; biology; phys. ed. & rec.
Louisiana	No	Yes	Phys. ed.; safety
Maryland	Yes	No	
Massachusetts	Yes	Yes	Phys. ed.
Michigan	Yes	Yes	Phys. ed. & rec.
Minnesota	Yes	Yes	Phys. ed.
Mississippi	Yes	No	
Missouri	No	Yes	Phys. ed.
Montana	Yes	Yes	Phys. ed.
Nebraska	No	Yes	Phys. ed.
Nevada	Yes	No	
New Hampshire	No	No	
New Jersey	Yes	No	
New Mexico	No	Yes	Phys. ed., rec. & safety
New York	Yes	No	
North Carolina	Yes	Yes	Phys. ed.
North Dakota	No	No	
Ohio	Yes	Yes	Phys. ed.
Oklahoma	No	Yes	Phys. ed.
Oregon	Yes	Yes	Phys. ed.
Pennsylvania	Yes	Yes	Phys. ed.
South Carolina	No	Yes	Phys. ed.
South Dakota	No	Yes	Phys. ed.
Tennessee	Yes	Yes	Phys. ed.
Texas	No	Yes	Phys. ed.
Utah	Yes	Yes	Phys. ed.
Vermont	No	Yes	Phys. ed.
Virginia	Yes	Yes	Phys. ed.
Washington	Yes	Yes	Phys. ed.
West Virginia	No	Yes	Phys. ed.
Wisconsin	Yes	No	
Wyoming	No	Yes	Phys. ed.

TABLE V
Requirements in Health Education for All Elementary Certification
Candidates

<i>State</i>	<i>Health Content</i>	<i>School Health Program</i>	<i>Health Instruction</i>
Alabama	three semester hours in health and phys. ed.		
Arizona	Yes, three units	None	None
Arkansas	six semester hours from the three areas		
California	None	None	None
Colorado	None	None	None
Connecticut	None	None	None
Florida	None	Yes, three units	None
Georgia	Yes, three units	None	Yes, three units
Hawaii	None	None	None
Illinois	three semester hours in health and/or phys. ed.		
Indiana	Any of the three areas — no units indicated		
Iowa	Yes	None	None
Kentucky	None	None	None
Louisiana	Yes, four units	None	None
Maryland	None	None	None
Massachusetts	None	None	None
Michigan	None	None	None
Minnesota	None	Yes	None
Mississippi	Yes, three units	None	None
Missouri	Yes, two units	None	None
Montana	None	None	None
Nebraska	Yes	None	None
Nevada	Yes	None	None
New Hampshire	None	None	None
New Jersey	Course in methods of teaching health and phys. ed.		
New Mexico	Methods course in health ed., phys. ed., rec., or safety		
New York	None	None	None
North Carolina	Yes, two units	None	None
North Dakota	None	None	None
Ohio	Yes	None	None
Oklahoma	Yes	Yes	None
Oregon	None	None	None
Pennsylvania	None	None	None
South Carolina	Yes, three units	None	None
South Dakota	None	None	None
Tennessee	Not less than six quarter hours in health		
Texas	None	None	None
Utah	None	None	None
Vermont	None	None	None
Virginia	six semester hours in health and phys. ed.		
Washington	None	None	None
West Virginia	three semester hours on content and program		
Wisconsin	None	None	None
Wyoming	None	None	None

Approved programs for teacher education institutions may include some preparation in health although none is specified at state level

TABLE VI

Requirements in Health Education for All Secondary Certification Candidates

<i>State</i>	<i>Health Content</i>	<i>School Health Program</i>	<i>Health Instruction</i>
Alabama	None	None	None
Arizona	Yes	None	None
Arkansas	six semester hours credit from these three areas		
California	None	None	None
Colorado	None	None	None
Connecticut	None	None	None
Florida	Yes	Yes	None
Georgia	Yes, three units	None	None
Hawaii	None	None	None
Illinois	three semester hours in health and/or phys. ed.		
Indiana	None	None	None
Iowa	Yes	None	None
Kentucky	None	None	None
Maryland	None	None	None
Massachusetts	None	None	None
Michigan	None	None	None
Minnesota	None	Yes	None
Mississippi	three units from these three areas		
Missouri	Yes, two units	None	None
Montana	None	None	None
Nebraska	Yes	None	None
Nevada	None	None	None
New Hampshire	None	None	None
New Jersey	Course in health education or test in phys. ed. & hygiene		
New Mexico	None	None	None
New York	None	None	None
North Carolina	Yes, 2 units	None	None
North Dakota	None	None	None
Ohio	None	None	None
Oklahoma	Yes	None	None
Oregon	None	None	None
Pennsylvania	None	None	None
South Carolina	Yes, two to three units	None	None
South Dakota	None	None	None
Tennessee	nine quarter units in health, phys. ed., and related areas		
Texas	None	None	None
Utah	None	None	None
Vermont	None	None	None
Virginia	at least one course in health		
Washington	None	None	None
West Virginia	None	None	None
Wisconsin	None	None	None
Wyoming	None	None	None

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